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TECHNICAL BULLETIN NO. 41 FIRST PRINTING
DOMINION OF CANADA—DEPARTMENT OF AGRICULTURE

FACTORS AFFECTING THE SUCCESS OF FARM MORTGAGE LOANS IN WESTERN CANADA

S. C. HUDSON

MARKETING SERVICE
ECONOMICS DIVISION

Published by authority of the Hon. JAMES G. GARDINER, Minister of Agriculture
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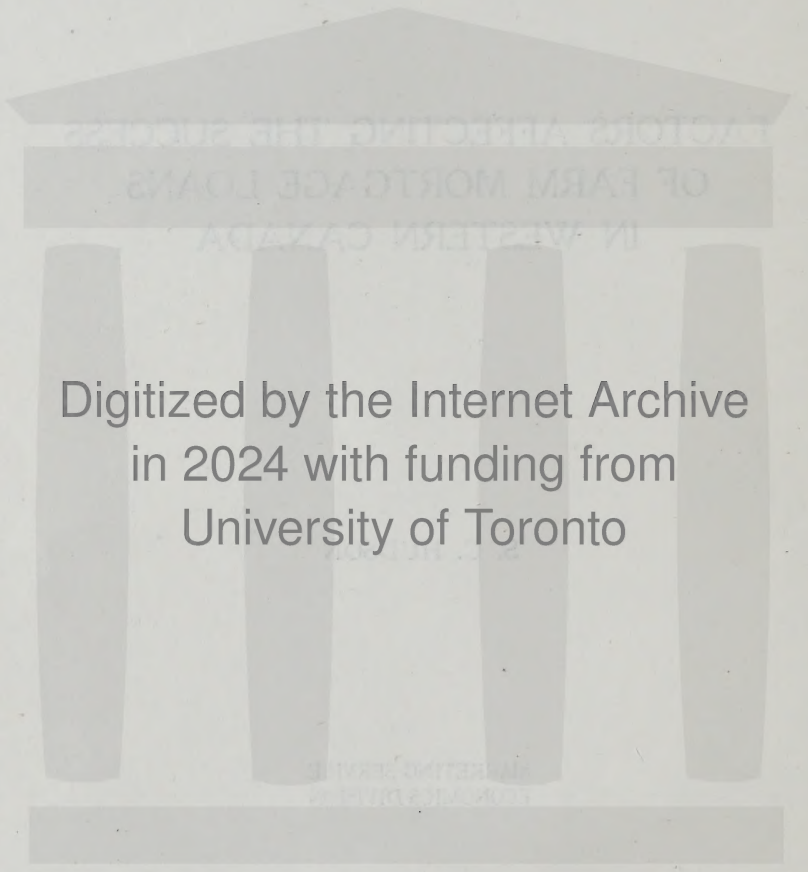

Foreword

THIS study presents the results of an analysis of the loaning experiences of a specific farm loan institution with a view to showing some of the factors which are associated with success of loans. Since in the agricultural industry of to-day much of the capital required must be borrowed, it is imperative, both from the standpoint of the industry and of the credit institutions, that loans be made on the soundest possible basis. In so far as the results of this study provide a guide to this end, all parties concerned are indebted to the officials of the Saskatchewan Farm Loan Board for making available and assisting in the interpretation of the basic data.

The author acknowledges his indebtedness to Mrs. G. G. Truscott (nee Miss B. E. Shuart), formerly of the Economics Division, Dominion Department of Agriculture, who carried on the statistical analysis and to Professor S. W. Warren, Cornell University, whose guidance throughout the study was invaluable. Thanks are also due Professor E. C. Hope, University of Saskatchewan, and to J. Coke, A. Gosselin and C. C. Spence, Economics Division, Dominion Department of Agriculture, for suggestions made during the course of the study.

Summary

The greatest single problem with which Saskatchewan agriculture has to contend is that of a highly variable farm income.

During the period of its operations, 1917 to 1935, the Saskatchewan Farm Loan Board made a total of 6,626 loans with a face value of over 17 million dollars. Of these loans 1,126 or 16·9 per cent were foreclosed.

As a result of broad differences in soil and climate, the percentage of the loans foreclosed was greatest in the northeast and southwest portions of the area.

Soil is probably the most important single factor affecting foreclosures. The proportion of the loans which were foreclosed on "poor" soils was three times as great as that on "excellent" soils.

A significant increase in foreclosures occurred on land of "hilly" topography as compared with that on level land.

The relative loan-paying ability of the different land classes into which the farm land of south central Saskatchewan has been divided on the basis of its suitability for wheat production, is reflected in the increased proportion of the loans foreclosed on land classified as marginal and submarginal.

Loaning experience indicates that under Saskatchewan conditions, farms of less than one-half section in area are poor risks.

The appraised value per acre and per farm reflects the relative loan-servicing ability of farms.

The long-time average municipal yield of wheat and the variability of yield are closely associated with the rate of foreclosure on Saskatchewan farms. This fact was not reflected in the average appraised values per acre.

The appraised value of buildings is a reliable index of the debt paying capacity of farms, the percentage of the loans foreclosed decreasing as the appraised value of buildings increases.

Such "personal" factors as the financial character, age, and marital status of the borrower as well as the number in the borrower's family are associated with the percentage of loans foreclosed.

The basis of appraisal employed by farm mortgage agencies operating in Western Canada up to 1936 has been sale value. Since sale values are for the most part based on current earnings, appraisals for loan purposes based upon sale values result in excessive liberality in lending during periods of rising prices while during a period of falling prices it is often impossible for a borrower to obtain sufficient credit to meet his needs.

While a sound appraisal is essential to safe loans, the loaning policy is also a very important factor in the success of a loan. Experience shows that a smaller proportion of the larger loans was foreclosed than of those which were for relatively small amounts.

The margin of security is one of the most important factors affecting risk of loan. The percentage of the loans foreclosed increased sharply as the loan increased in percentage of the appraised value. On farms having a low gross

income a larger proportion of the family returns goes towards living expenses, hence a smaller part is available for servicing loans. The margin of security should, therefore, be greater on small farms and farms of low productivity.

The large accumulation of arrears of interest, as well as the small reduction in the principal outstanding in the case of loans studied indicates that the system of fixed payments of blended interest and principal is not adapted to the extreme variability of income on Saskatchewan farms.

A comparison of the adaptation of different loan repayment plans to actual loans indicates that the establishment of a flexible loan repayment system, based on a share of the wheat crop, by loaning agencies in Western Canada, would materially aid in the repayment of loans.

Such factors as soil, topography, land class and size of farm are closely associated with the cost of holding farm real estate and with losses incurred on real estate sold.

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FACTORS AFFECTING THE SUCCESS OF FARM MORTGAGE LOANS IN WESTERN CANADA[1]

S. C. Hudson

The lack of adequate financial resources is often the most important limiting factor in the successful operation of a farm. A higher degree of commercialization accompanied by an increase in mechanization has greatly increased the capital requirement in recent years. These needs can be met only by financial institutions designed to meet farmers' credit needs. The efficient organization and operation of such institutions are essential to a prosperous agriculture.

Purpose of Study

This study is based on the belief that there are certain factors associated with each loan which account for its success or failure. The purpose of this study, therefore, is to determine, by studying the loaning experiences of a specific agricultural credit institution, certain principles governing the successful operation of similar institutions and to indicate those factors which are associated with success of loans. The organization selected for this purpose was the Saskatchewan Farm Loan Board which made loans to farmers throughout the province of Saskatchewan during the period 1917 to 1935 and is thus singularly well adapted to serve such a purpose. While information was not available with regard to all factors, an attempt has been made to determine the relationship between those factors for which information was obtainable and the success of individual loans. Since success of a loan is, in the final analysis, dependent on financial success in farming, knowledge with respect to those factors associated with successful and unsuccessful loans should prove useful, not only to those agencies or individuals making loans on the security of farm real estate, but also to all farmers who are at the same time potential borrowers.

Scope and Method

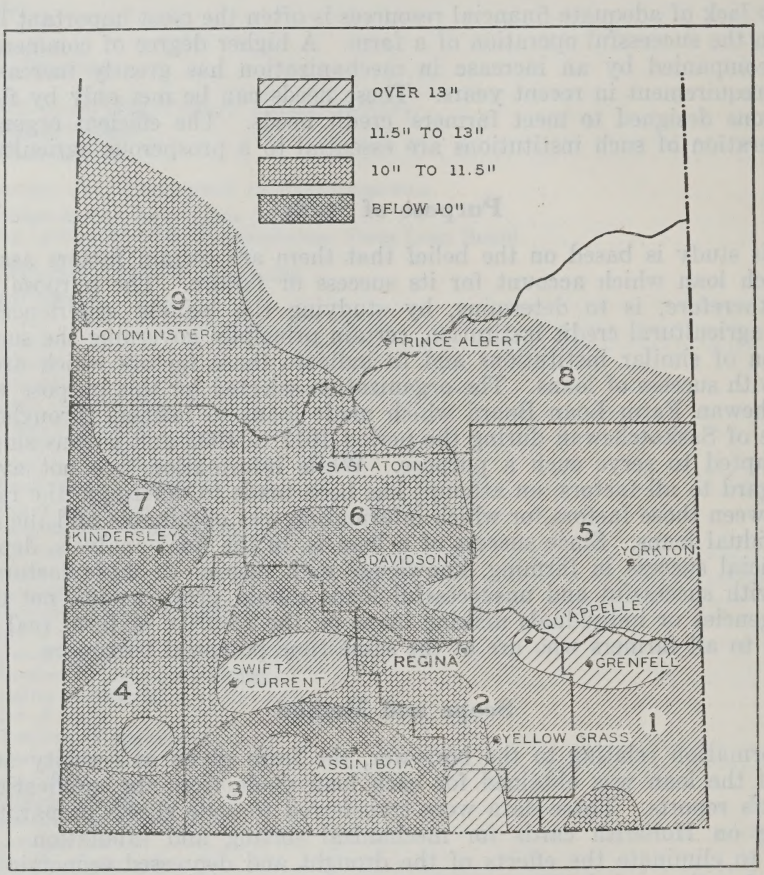
Information relating to the borrower, the farm given as security and the status of the loan was obtained for each loan made from the application and inspector's reports. These data were transferred to code sheets preparatory to punching on Hollerith cards for mechanical sorting and tabulation. In an attempt to eliminate the effects of the drought and depressed economic conditions during the period 1929 to 1935, information relating to the status of the loans was obtained as at 1929 as well as at 1935. The principal measure used to denote the relative success or failure of loans was the percentage of the loans made which had been foreclosed. On account of legislation limiting the use of foreclosure proceedings by loaning agencies against delinquent borrowers, it was considered necessary also to examine the standing of current loans. The relative success of current loans was measured by the percentage of the loans in good standing and by the amount owed on current loans expressed as a percentage of the original loans.

[1] Presented to the Faculty of the Graduate School, Cornell University, as a thesis in partial fulfilment of the requirements for the Degree of Doctor of Philosophy; later revised for publication in the present form.

41550—3

Description of the Area[1]

Climate.—The climate of the Prairie Provinces of Canada is typical of north temperate continental regions and may be classed as semi-arid to sub-humid. It is characterized by great extremes in temperature between summer and winter seasons and comparatively low annual precipitation. Since in such an area moisture is the most important factor limiting plant growth, the seasonal distribution of the precipitation together with the activity of the evaporation—transpiration factors, which govern losses of moisture to the atmosphere, are of great importance. Significant variation in average precipitation occurs between



Courtesy, Research Dept., Searle Grain Company Limited.

FIG. 1.—Map of Southern Saskatchewan showing Crop Districts and Long-time Average Annual Precipitation.

different areas. Great variation also occurs from year to year within crop districts. The moisture efficiency is, generally speaking, lowest in the south-western part of the province. The growing season also varies widely between different parts of the province, ranging from 125 days in the south central part to 70 days in the northern fringe of agricultural development (figure 2).

1 Many of the data relating to the climate, soil, and topography have been taken from Soil Survey Report, No. 10, University of Saskatchewan.

Soil.—The type of natural vegetation is influenced directly by the broad differences in climatic conditions occurring over the province. The effects of climate and natural vegetation in turn are the dominant factors in soil development in the area. From this point of view Saskatchewan is divided into four major soil zones (figure 3). Each soil zone is named according to the prevailing colour of the surface soil, the colour indicating the relative amounts of organic matter built up in the soils as the result of the nature of plant growth in the area over long periods of time.

In the southwestern section of the province, the natural vegetation consisted of a thin stand of relatively short grass. This, in addition to the presence of sagebrush, cactus and greasewood, reflects the arid nature of the climate. The limited moisture supply has allowed only a short thin cover of natural vegetation to develop with the result that the amount of organic matter in the soil is relatively low, giving the soil a light brown colour. This section is known as the Short Grass Prairie Region or the Brown Soil Zone.

To the northeast of this area lies the Intermediate Prairie Region where climatic conditions are less arid. This region forms a transition between the Short Grass Prairie in the southwest and the sub-humid tall grass or Park Region in the northeast. It is characterized by a somewhat heavier stand of grasses than the Short Grass Region and includes some of the taller grasses in addition to small clumps of aspen and willow. The darker surface soil of this region reflects the somewhat better moisture conditions and the heavier vegetative cover giving it the name of the Dark Brown Soil Zone.

North and east of the intermediate prairie is the tall-grass Park Region, where the luxuriant growth of tall grasses and shrubs, and numerous bluffs of aspen, black poplar and willow reflect the more moist conditions of a sub-humid climate. Here the abundant vegetative cover has given rise to dark-coloured soils, having a high organic-matter content with the result that the area is known as the Black Soil Zone.

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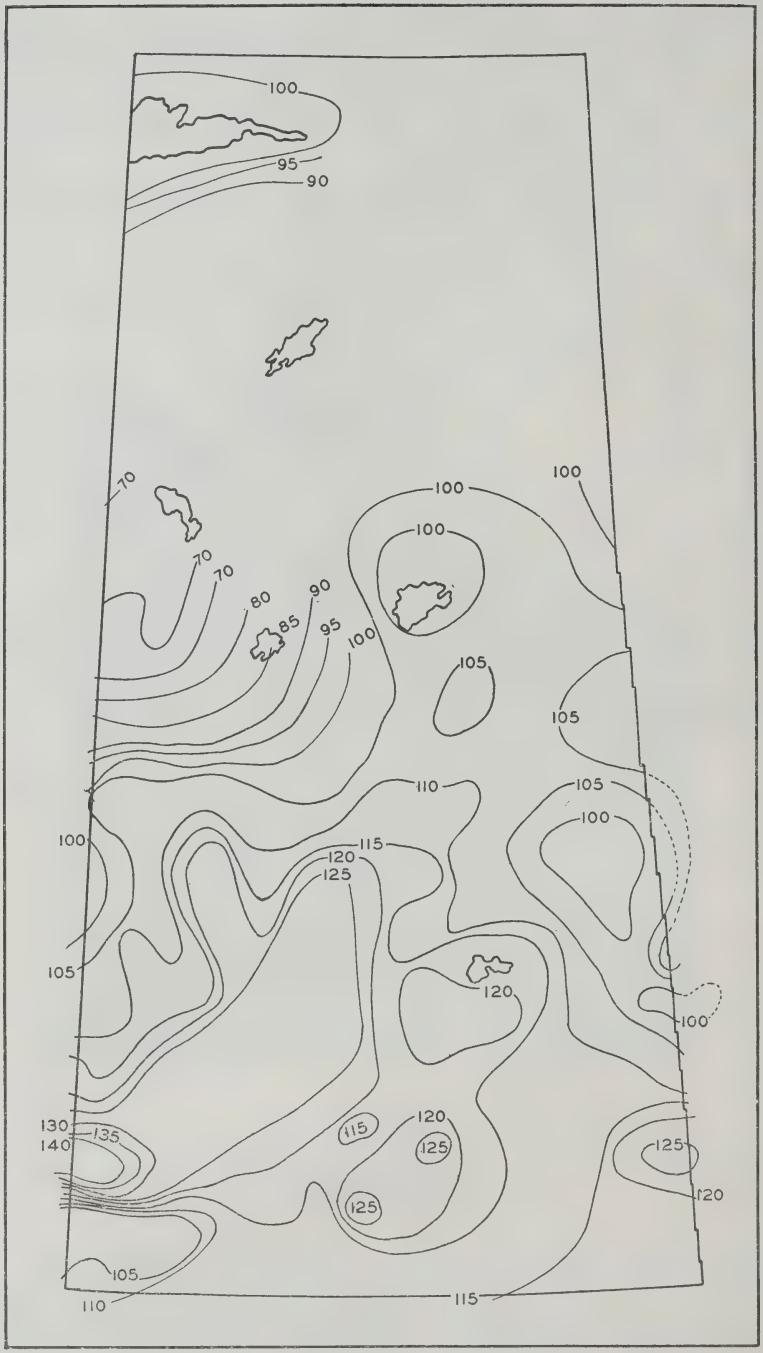
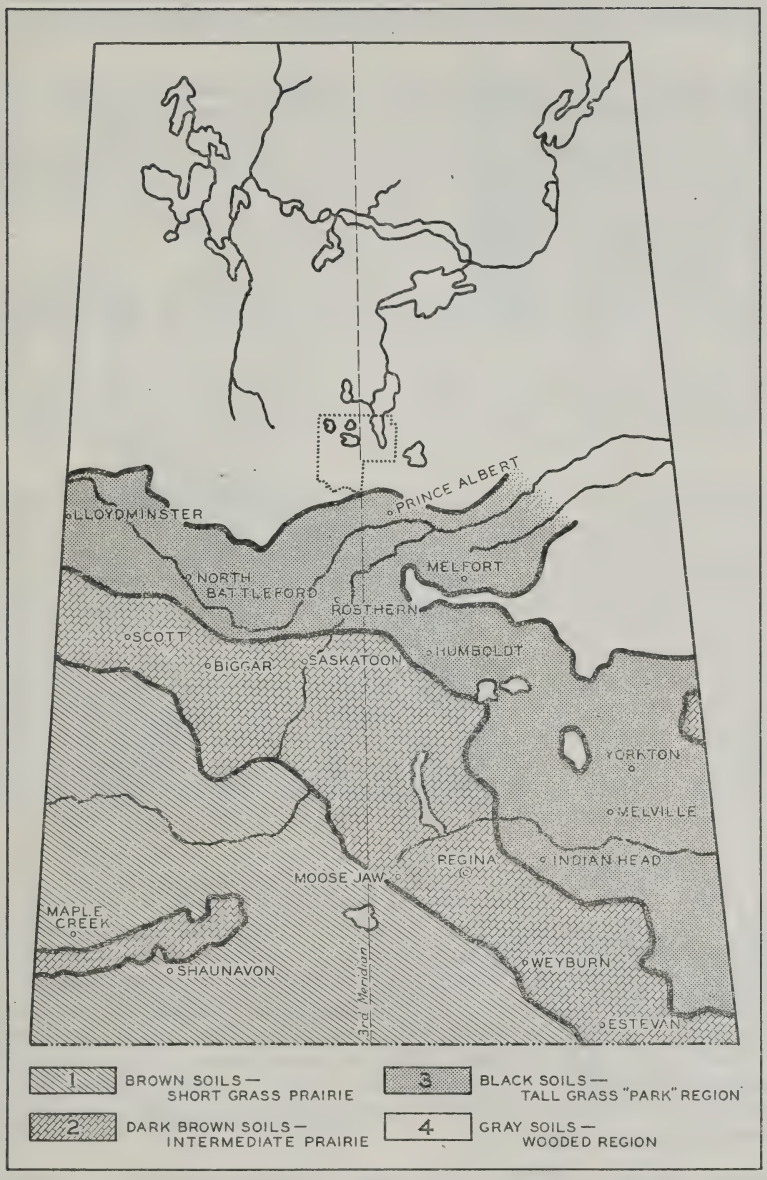


Courtesy of the Dominion Bureau of Statistics, Ottawa.

FIG. 2.—Map of Saskatchewan showing Average Length, in Days, of Growing Season.



Courtesy of Soils Department, University of Saskatchewan

FIG. 3.—Map of the Province of Saskatchewan showing the Main Soil—Climatic Zones.

North of the Park Region the Forest Region or Grey Soil Zone is encountered, where the dominant vegetation consists of aspen, poplar, willow, spruce and pine trees together with numerous shrubs. Contrary to the situation in the Park Region where high precipitation coupled with favourable temperature conditions resulted in a black soil of high organic content, the soils in this area are characterized by an ashy-grey layer just below the surface and are rela-

tively low in organic matter. The main factor influencing the formation of these grey soils appears to be the effect of a long established forest cover of coniferous trees.

While each of the above soil zones is characterized by definite conditions of climate and natural vegetation, the soil profiles in any zone may vary because of differences in geological origin, texture, topography or drainage. For purposes of classification the soils within each soil zone are divided into series based on geological origin, each series in turn being further subdivided according to texture or soil type. Variations in soil type may be classified into topographic, poorly drained (alkali), stony and gravelly phases.

In a grouping of the soils in the area according to their suitability for wheat production by the Soils Department of the University of Saskatchewan, over 30 per cent of the area is classified as "good", 25 per cent as "fair", 18 per cent as "poor" and 26 per cent as "very poor". Since the last group includes much definitely non-arable land little of it has been brought under cultivation. The "poor" group, however, presents a very real problem in land utilization since a large part of it has been brought under the plough.

Topography.—The topography of Saskatchewan might be described as undulating to rolling, broken by the valleys of streams and by a number of escarpments, small hills and plateau-like elevations. One of the most prominent topographical features is an escarpment known as the Missouri Coteau which extends from the eastern boundary of Montana in a northwesterly direction to a point near Lloydminster on the Saskatchewan-Alberta border. East of this escarpment the elevation ranges from 1,000 to 2,000 feet above sea level while on the west the elevation is generally greater, ranging in the main from 2,000 to 3,000 feet. The greatest elevation is found in the Cypress Hills and Wood Mountain near the southwestern corner of the province where some points reach an elevation of 4,000 feet. Within these areas there are of course wide variations in topography between farms. Such topographic variations have an important influence on the agricultural use of the land and hence on its income.

Type of Farming.—The type of farming carried on in any area is the result of man's efforts to adjust himself and his resources to his environmental conditions. The most important of those environmental factors affecting type of farming are climate, soil, topography and location in relation to markets. As a result of the combination of a climate favourable to the development of wheat of high milling quality, a rich soil, a relatively level topography and the absence of large centres of population to provide a nearby market, wheat is the principal source of income throughout practically the entire area. While produced on a highly specialized basis in the Central Plains Area, in other parts of the province it is produced in combination with other enterprises under a more diversified type of organization (figure 4).[1]

The only areas in which wheat is not the major source of income is the northern pioneer fringe and in the southwest corner of the province. Because of its very recent settlement no permanent type of farming has emerged in the former area, most farms being at a subsistence stage of development. The latter area makes up part of the Cypress Hills region and because of the more rugged topography and low precipitation is devoted to cattle ranching. As may be seen from figure 4, the more common combination with wheat is cattle or hogs or both. Such combinations are more important in the eastern and northern parts of the province where a higher precipitation favours the production of

[1] McArthur, I. S. and Coke, J.: "Types of Farming in Canada." Farmers' Bulletin No. 17, Dominion Department of Agriculture.

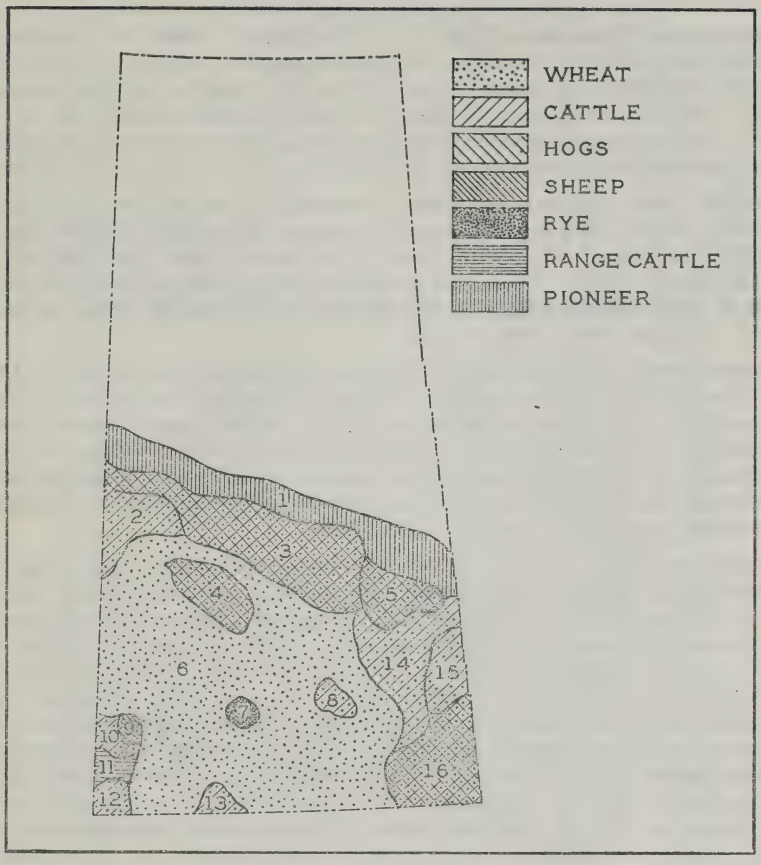


FIG. 4.—Types of Farming Areas in Saskatchewan.[1]

1. Northern Pioneer Fringe: pioneer.
2. Spruce Lake: wheat, cattle.
3. Prince Albert, North Battleford: wheat, cattle, hogs, feed grains.
4. Saskatoon: wheat, cattle, hogs, feed grains.
5. Wadena: wheat, cattle, hogs, poultry, feed grains.
6. Central Plains area: wheat.
7. Chaplin area: wheat, rye.
8. Regina, Bethune: wheat, dairy cattle.
9. Municipalities 140 and 170: wheat, cattle, sheep.
10. Maple Creek, Hatton: wheat, cattle.
11. Municipalities 80, 81 and 82: range cattle.
12. Consul: wheat, cattle.
13. Municipalities 14-15-16: wheat, cattle.
14. Central Eastern Saskatchewan: wheat, dairy and beef cattle.
15. Qu'Appelle Valley north: wheat, dairy and beef cattle, poultry, hogs.
16. Southeastern Saskatchewan: wheat, cattle, hogs.

coarse grains which are the basis of the live stock enterprises. Dairying has been developed near Regina and Saskatoon as well as other centres of population which offer a favourable market outlet. In certain parts of the Central Plains area flax and rye are important cash crops while barley and oats are also grown for sale in many areas. With the exception of the two areas mentioned above, however, it should be noted that wheat is the principal source of income in combination with which these other enterprises are carried on.

[1] Adapted from op. cit. p. 16.

The Agricultural Situation in Saskatchewan

Agricultural Income.—There is no important source of income in Saskatchewan which is not derived, in the final analysis, from agriculture. In 1935 agriculture accounted for over 79 per cent of the value of all production in the province.[1] Since for the period 1920 to 1937, 78 per cent of the agricultural income in Saskatchewan was derived from wheat the income of the province as a whole depends fundamentally on the volume, grade and price of wheat.[2]

Receipts from the sale of farm products in Saskatchewan vary widely. During the period 1926 to 1936 receipts ranged from $316,214,000 for 1928 to $68,484,000 for 1931.[3] Revenue from crops ranged from $285,998,000 in 1928 to $50,163,800 in 1931. It is this problem of extreme fluctuations in income which is of such vital concern to the western wheat farmer whose expenses are relatively constant from year to year.

Fluctuations in farm income in Western Canada are the result of three main factors: the price, yield and grade of wheat. During the period 1913 to 1930 the variability of the price of wheat on the Canadian prairie ranged from 30 to 35 per cent.[4] Considering only the more normal post-war period 1921 to 1930 the coefficient of variability at prairie points varied from 15 to 20 per cent.[5] The course of the farm price of wheat in Saskatchewan together with its purchasing power since 1914 is shown in figure 5.

During and following the World War 1914-1918 wheat prices rose more or less constantly to register an all-time high in 1920, two years after the close of the war. During this period of rapidly rising farm prices, the prices of things which farmers buy rose much more slowly, giving farmers and other primary producers a high purchasing power relative to other groups having a more constant income. Following 1920, however, the reverse situation occurred. Wheat prices dropped precipitously until 1924, while the prices of things farmers buy remained relatively fixed. This deflationary period inflicted severe hardships on Saskatchewan farmers, many of whom had bought land at very high prices during the earlier period and made other long-term commitments which could not be supported by the reduced prices. Considerable improvement occurred between 1925 and 1929 as a result of a stronger demand for Canadian wheat. Following 1929, however, prices declined to about one-half of the 1914 level. As a result of the lag in the decline of the prices of things which farmers buy, the index of farmers' purchasing power dropped well below that of 1914. This depression period, coinciding as it did with prolonged drought, was characterized by a liquidation of assets, postponement of equipment replacement, lower standards of living and an enormous accumulation of indebtedness. Following 1933, which marked the trough of the depression, prices recovered gradually until in 1937 the level of 1929 was reached.

In giving consideration to the problem of variation in volume of production both area and rate of production must be considered. While the area planted to wheat is varied somewhat from year to year according to farmers' expectation of price tempered by their financial resources, the practice of maintaining acreage relatively constant is adhered to fairly closely because of the lack of an alternative use for the land in much of the province. Yield, therefore, is by far the most important factor determining volume of production.

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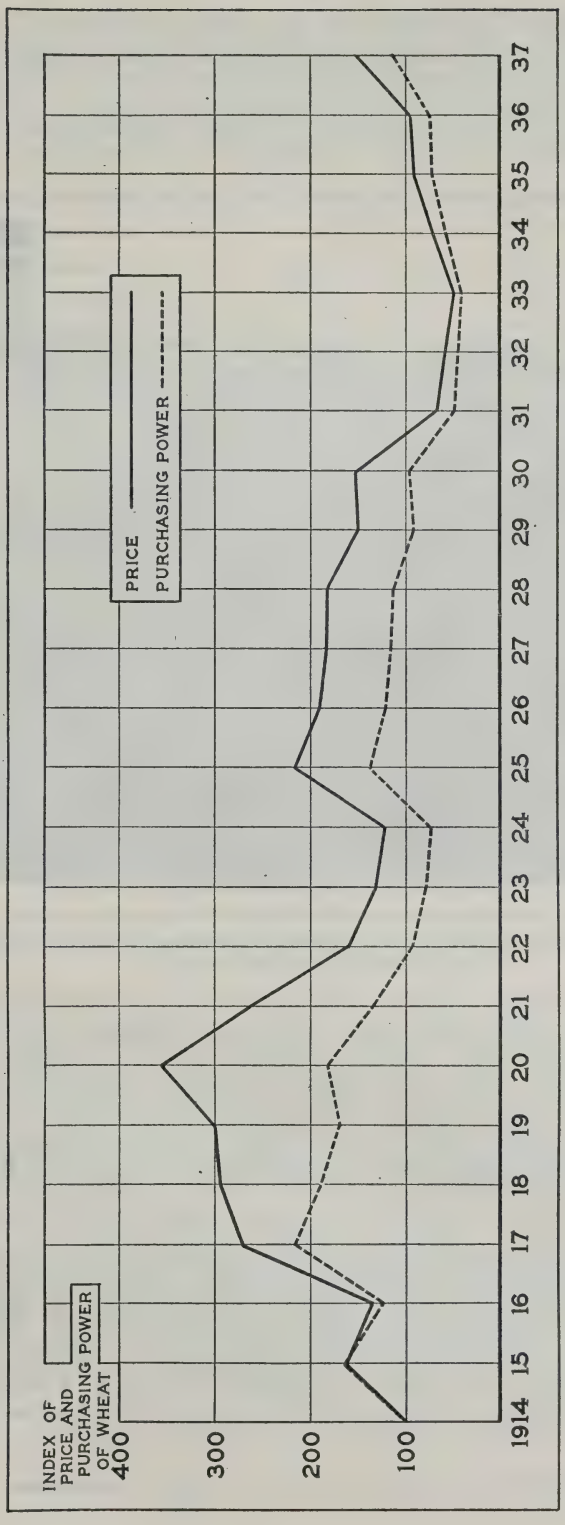
[1] "A Submission by the Government of Saskatchewan to the Royal Commission on Dominion-Provincial Relations," p. 170.

[2] Ibid, Table 2, p. 173.

[3] Rutherford, J. B., "Receipts from the Sale of Farm Products in Manitoba, Saskatchewan and Alberta by Months, 1926-1936". Dominion Bureau of Statistics, Ottawa.

[4] Mackintosh, W. A., "Economic Problems of the Prairie Provinces", p. 22.

[5] Ibid.



Courtesy, Research Dept., Searle Grain Co., Ltd.

FIG. 5.—Comparison of Changes in the Farm Price and Purchasing Power of Wheat, 1914-1937.

Yields range from 11·6 bushels per acre with a coefficient of variability of 59·6 per cent for Crop District No. 4 to 19·4 bushels per acre with a coefficient of variability of 21·6 per cent for Crop District No. 8.[1] The crop district having the lowest yield had the highest variability while the one having the highest yield had the lowest variability. Generally speaking, the lowest yields and greatest variability in yields are obtained in the southwestern portion of

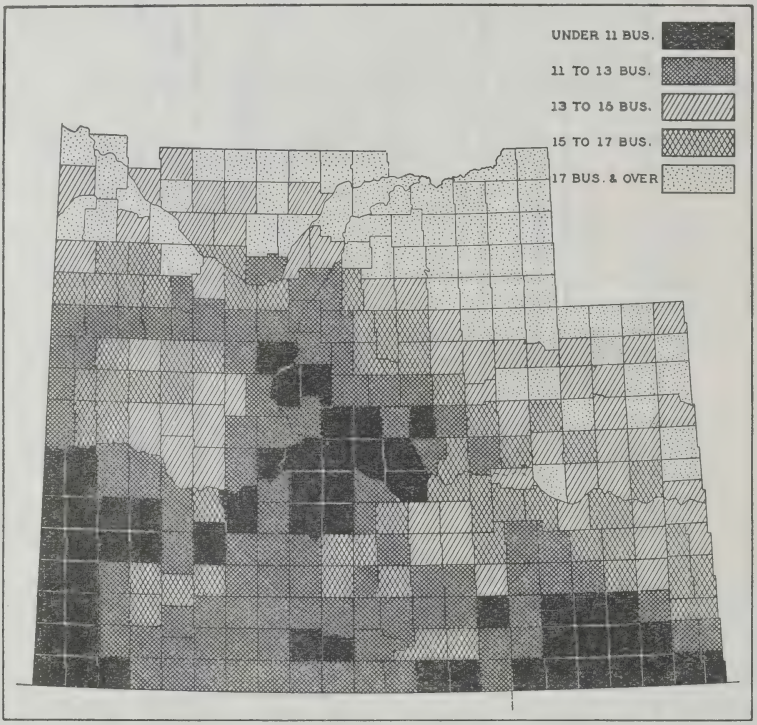


FIG. 6.—Map of Southern Saskatchewan showing the Average Yields of Wheat per Acre by Municipalities, 1918-1935.

the province while the highest yields and least variability are found in the northeastern part of the area. Great variations also occur within crop districts as is shown in figures 6 and 7 in which the rural municipalities are classified according to yield and variability of yield, respectively. In Crop District No. 6 for example, Rural Municipality No. 223 has a long-time average yield of 8·8 bushels per acre and a coefficient of variability of 86·4 while R.M. No. 339 has an average yield of 16 bushels per acre and a coefficient of variability of 20·6. Similar variations occur between farms within the same municipality.

The grade of wheat produced also has an important effect on gross income. The simple average of the prices paid at Winnipeg for different grades of wheat for the period 1917-1935 was $1.31 for No. 1, $1.27 for No. 2, $1.23 for No. 3 and $1.18 for the average of all wheat grading below No. 3. That is, those farmers who during this period consistently produced No. 1 wheat received on the average a premium of 4 cents per bushel over No. 2, 8 cents per bushel over No. 3 and 13 cents per bushel over the average of the grades falling below No. 3.

[1] Hansen, W. J. Unpublished manuscript, Crop Insurance, Province of Saskatchewan.

Great variation exists in the quality of the crop from year to year, and this causes violent fluctuations in returns from the wheat crop. These variations tend to partly offset variations in yield since there is a tendency for large crops to be of low average grade and vice versa. In other words weather conditions which produce high yields, notably abundant moisture, tend to affect grade adversely.

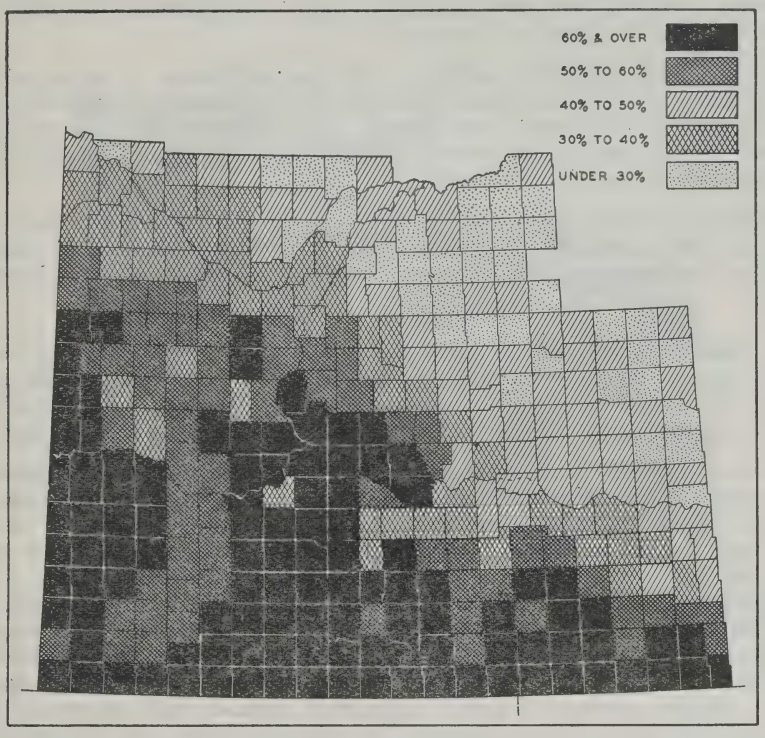


FIG. 7.—Map of Southern Saskatchewan showing the Average Variability of Wheat Yield per Acre by Municipalities, 1918-1935.

Farm Indebtedness.—The nature and rapidity of agricultural development made Saskatchewan essentially a debtor community. Since 1930 depression and drought combined to increase both the absolute and relative burden of farm indebtedness far beyond the debt-paying capacity of many farms. The estimated debt secured by farm lands in the province of Saskatchewan as of December 30, 1936, was $434,000,000.[1] Unsecured debt was estimated at $91,000,000 at the same date, making a total agricultural debt of $525,000,000.[2] Reduced to simple terms this sum would equal $3,687 per farm or almost $16 per acre of crop land.

To protect the farmer against insistent creditors following the drop in farm income, debt postponement legislation was passed in 1931 and was supplemented by amendments and further measures dealing with debt adjustment in succeeding years. It is estimated that debt adjustments totalling some $83,000,000 were effected during 1937.[3] Allowing for this adjustment the agricultural indebtedness in the province of Saskatchewan at the end of 1937 was estimated at $482,000,000.[4]

[1] Submission by the Province of Saskatchewan to the Royal Commission on Dominion-Provincial Relations, 1937.
[2] Ibid.
[3] Ibid.
[4] Ibid.

The Financing of Agriculture in Saskatchewan

"Without the availability of vast amounts of credit the rapid development of the prairie would have been impossible."[1] According to a survey of representative areas in Saskatchewan, carried out in 1935, the principal source of long-term credit for Saskatchewan farmers is loan and mortgage companies which held 49 per cent of all loans at that time.[2] Private lenders accounted for 28 per cent, banks 12 per cent, and the Crown as represented by the Department of Natural Resources 11 per cent.[3]

A government-controlled institution for the advancing of funds to farmers on the security of farm mortgages first came into existence in 1917 in the form of the Saskatchewan Farm Loan Board. The primary object for which the Board was established was to secure "a lowering of the rate of interest on farm mortgages throughout the province".[4]

In 1936 somewhat less than 7 per cent of the total funds advanced on the security of first mortgages or almost 4 per cent of that secured by mortgages together with agreements of sale was provided by the Saskatchewan Farm Loan Board.

The Saskatchewan Farm Loan Act.—The Saskatchewan Farm Loan Act which was passed by the Provincial Legislature in 1917 provided for the appointment of the Saskatchewan Farm Loan Board which was authorized to lend money to agriculturists on the security of first mortgages on farm land.

The Act provided that loans would be repayable on an amortization basis over a period of 30 years in equal annual instalments of interest and principal, the rate of interest to be such as is considered sufficient to cover the interest paid for the money in addition to the costs of operation. This rate was fixed at $6\frac{1}{2}$ per cent at which rate it remained until April 7, 1934, when an amendment to the Act reduced the rate of interest on all indebtedness due to the Saskatchewan Farm Loan Board to 5 per cent per annum until October 31, 1935, the measure being retroactive to November 1, 1931.[5] Since October 31, 1935, interest has been at 6 per cent per annum. In order to encourage borrowers to reduce interest arrears as much as possible, bonuses were given on all payments made on their interest account. In 1935 the bonus varied from 25 cents to $1 for each dollar paid according to the severity of the drought. In 1936 a bonus of $1 for each dollar paid was given throughout the province. Repayment of principal in whole or in part in excess of amount due was allowed on the date at which any instalment fell due.

Subject to the provisions of the Saskatchewan Farm Loan Act, the Saskatchewan Farm Loan Board commenced operations in 1917. After an active period of approximately 18 years the Board ceased making new loans in 1934, subsequent to the passing by the Saskatchewan Legislature of the Farm Loan Enabling Act, which was designed to facilitate the operation in Saskatchewan of the Canadian Farm Loan Act.[6]

Loaning Operations of the Saskatchewan Farm Loan Board.—From its organization in 1917 to December 31, 1935, the Saskatchewan Farm Loan Board closed a total of 6,626 loans having an average value of $2,594, making

[1] Allen, William, E. C. Hope, and I. S. McArthur, "Studies of Farm Indebtedness and Financial Progress of Saskatchewan Farmers", Report No. 2, University of Saskatchewan, Ext. Bul. No. 65, p. 52.

[2] Elliott, G. C., "Real Estate Indebtedness in Southwest Central Saskatchewan", The Economic Annalist, Vol. VII, No. 1, (February, 1937).

[3] Ibid.

[4] Province of Saskatchewan, Sessional Paper, No. 20, 1919-20.

[5] Statutes of the Province of Saskatchewan, 1934, chap. 37.

[6] Statutes of the Province of Saskatchewan, 1934, chap. 59.

a total investment of $17,189,149. Of the total loans made 932 of 14·1 per cent, having a face value of $2,018,186, were discharged. Of the total discharged about 42 per cent were paid by new loans while the remainder or 58 per cent were paid by cash. At the time of discharge 85 per cent of the principal on these loans was outstanding.

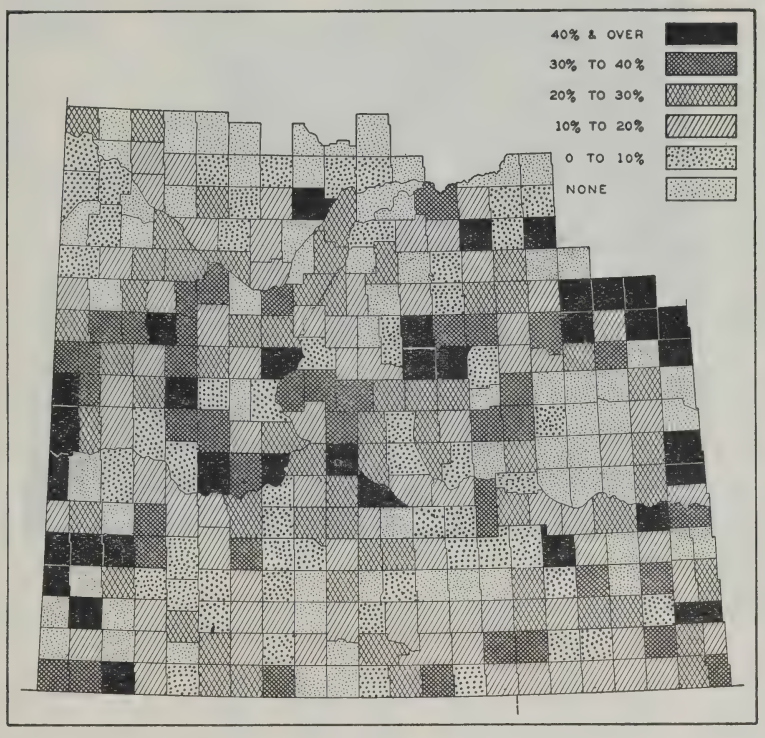


Fig. 8.—Map of Southern Saskatchewan showing Percentage of Loans which had been Foreclosed as at November 31, 1935, by Municipalities.

During the same period, the Board foreclosed 1,126 loans with a face value of $2,892,626. These foreclosed loans, the distribution of which is shown in figure 8, made up 16·9 per cent of the total number of loans made during the period. At the time of foreclosure less than 7 per cent of the principal on these loans had been repaid.

At December 31, 1935, there were 4,568 loans outstanding with a face value of $12,258,882. Principal outstanding on current loans amounted to $11,194,614 or 91·3 per cent of the face value. Of the loans which were current in 1935, 8·1 per cent were in good standing, 4·0 per cent were delinquent on interest, 2·8 per cent were delinquent on principal only, 29·4 per cent were delinquent on interest and principal and 55·7 were delinquent on interest, principal and advances to cover taxes, seed and repairs. The relative position of municipalities with respect to the amount outstanding on loans expressed as a percentage of the original loan is presented in figure 9. In the case of less than 31 per cent of the loans outstanding on November 1, 1935, the debt to the Board was equal to or less than the original loan. On about 51 per cent of the loans the debt at this time was between 100 and 130 per cent of the original loan while on 18 per cent of the loans the debt was more than 30 per cent greater than the amount originally borrowed.

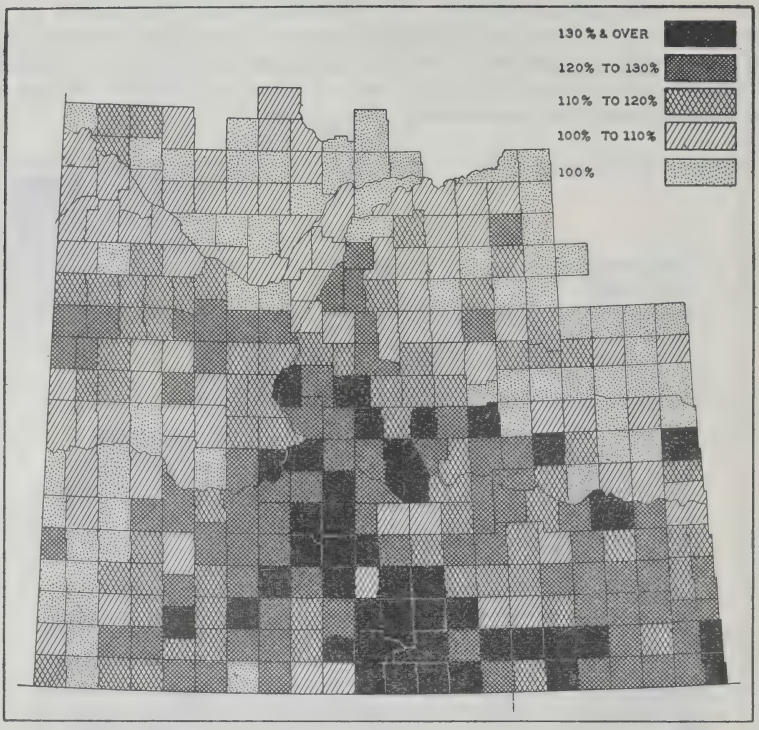


FIG. 9.—Map of Southern Saskatchewan showing the Amount Outstanding on Loans Expressed as a Percentage of the Original Loans by Municipalities, 1935.

Factors Affecting the Success of Loans

Climatic Regions.—The natural division of the province into four major soil zones resulting from broad differences in climatic conditions as reflected in the natural vegetative cover, was discussed in an earlier section. Wide variations in rainfall also occur within each soil zone between the eastern and western parts of the province. In order to take into consideration these climatic differences, for purposes of analysis, those portions of the province lying east and west of the third meridian were considered separately (figure 3). The influence of these broad climatic zones on the status of the loans made is shown in tables 1 and 2 for 1929 and 1935, respectively. In both years it may be noted that while in the eastern portion of the province, the percentage of loans foreclosed increased progressively between the short grass plains in the south and the wooded area in the north, the reverse situation is true in the western section where the proportion of the loans foreclosed decreased regularly between the southern and northern zones.

TABLE 1.—RELATION OF CLIMATIC AND SOIL ZONES TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1929

Climatic and soil zones	Number reporting	Acres mortgaged per farm	Bushels of wheat per acre	Per cent variability of yield	Appraised value (dollars per acre)	Per cent in good standing	Debt in 1929 in per cent of original loan	Per cent foreclosed
Eastern Saskatchewan—								
Brown soil	438	296·6	12·2	63·3	20·74	13·0	98·5	5·5
Dark brown	695	356·1	12·4	51·1	30·33	22·0	97·7	6·6
Black	572	264·7	17·3	32·4	20·96	25·9	101·2	7·7
Grey	71	196·0	19·8	26·3	14·43	31·0	98·9	8·5
Total or average—Eastern Saskatchewan	1,776	305·1	14·2	47·2	25·03	21·3	98·7	6·8
Western Saskatchewan—								
Brown soil	1,199	291·0	12·2	63·7	22·16	21·9	98·1	15·1
Dark brown	529	346·2	12·6	52·7	26·21	24·0	96·4	7·2
Black	397	247·9	16·6	41·0	19·67	25·2	95·1	6·8
Grey	35	213·8	17·8	36·9	12·12	37·1	97·0	2·9
Total or average—Western Saskatchewan	2,160	295·4	13·3	56·0	22·85	23·2	97·1	11·4
Total or average—Province	3,936	299·9	13·7	51·9	23·88	22·4	97·9	9·3

The amount owing on current loans in 1929 in per cent of the original loans formed a similar pattern to that formed by foreclosures, the loans in the south-eastern and northwestern parts of the province being in a better condition than those in other areas. As a result of the greater regularity of income in the northern zones, however, the proportion of the loans in good standing increased consistently in the more northerly areas in both eastern and western sections of the province.

TABLE 2.—RELATION OF CLIMATIC AND SOIL ZONES TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1935

Climatic and soil zones	Number reporting	Acres mortgaged per farm	Bushels of wheat per acre	Per cent variability of yield	Appraised value (dollars per acre)	Per cent in good standing	Debt in 1935 in per cent of original loan	Per cent foreclosed
Eastern Saskatchewan—								
Brown soil	556	308·8	12·2	63·5	21·07	0·7	130·0	16·7
Dark brown	1,093	368·4	12·4	52·2	28·05	3·1	120·1	18·1
Black	756	283·0	17·1	33·0	20·89	13·0	112·7	18·4
Grey	74	202·6	20·0	26·4	16·01	10·8	98·9	28·4
Total Eastern	2,479	304·5	14·0	48·3	24·44	5·8	120·1	18·2
Western Saskatchewan—								
Brown soil	1,784	321·1	12·1	64·6	22·36	3·6	120·6	21·9
Dark brown	660	352·9	12·7	53·1	26·33	5·2	116·0	20·3
Black	473	262·2	16·7	40·6	19·94	18·6	103·0	11·8
Grey	48	218·9	18·1	36·5	12·91	27·1	97·8	6·3
Total Western	2,965	315·9	13·2	57·3	22·86	6·7	116·8	19·7
Total, Province	5,444	319·8	13·5	53·2	23·60	6·3	118·3	19·0

Soil.—Within climatic regions the most important single factor influencing agricultural production is that of soil. The four main soil zones are divided into soil series based on similarity of profile and parent material and which usually are named after the place where the particular series was first found. The soils of the surveyed area of Saskatchewan have been placed in twenty series. Each soil series in turn has many variations or soil types depending on the differences in the clay, silt and sand content of the soil profiles. Within soil types variations occur which are classified as topographic, poorly drained, stony and gravelly phases.

TABLE 3.—RELATION OF TYPE OF SOIL TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1929

Type of soil	Number reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Loan per farm (dollars)	Loan in per cent of appraised value	Per cent in good standing	Debt in 1929 in per cent of original loan	Per cent foreclosed
Excellent	542	330·5	29·68	4,039	37·4	27·3	95·9	5·4
Good	1,555	302·4	24·30	3,510	39·3	21·0	98·1	7·7
Fair	964	294·5	22·18	2,976	38·4	21·9	97·5	10·5
Poor	708	299·4	21·51	2,409	38·4	20·1	100·3	15·5
Total or average	3,769	304·1	24·18	3,290	38·5	21·9	97·9	9·6

The predominant soil type of each farm given as security for a loan was obtained by locating each one on the soil map. Grouping these farms on the basis of the suitability of the soil for wheat production,[1] the relationship of soils to status of loan was studied (tables 3 and 4). While the better soils were valued higher than the inferior soils by the loan inspectors, the appraised value per acre ranging from $30 for excellent, to $21 for very poor soils, it would seem that the better soils were not valued as much above the lower grades as their

1 Soil Survey Report No. 10, University of Saskatchewan. Table 17, p. 117.

productive capacity would warrant. This is indicated both by the higher proportion of the loans foreclosed and the lower proportion of the loans in good standing in the inferior soil groups as compared with the more productive soils.

TABLE 4.—RELATION OF TYPE OF SOIL TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1935

Type of soil	Number reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Loan per farm (dollars)	Loan in per cent of appraised value	Per cent in good standing	Debt in 1935 in per cent of original loan	Per cent foreclosed
Excellent	807	334·5	29·62	3,466	35·3	9·8	114·2	10·4
Good	2,168	323·0	23·52	2,763	36·8	6·0	119·2	18·4
Fair	1,111	319·4	22·29	2,595	37·0	5·8	120·4	22·1
Poor	942	326·3	20·74	2,420	36·2	2·7	121·0	31·4
Total or average	5,228	324·5	23·86	2,786	36·4	5·7	118·7	19·6

Similar results are obtained when an index for rating the comparative agricultural value of the soils of Saskatchewan prepared by the Soils Department of the University of Saskatchewan is applied to the different soil types and the farms classified on this basis. The average municipal yield of wheat[1] for the farms included varied from 15·7 bushels per acre for soils in the highest index grouping to 12·7 bushels for soils in the lowest group, while the average variability of yield ranged from about 45 per cent for the highest group to 57 per cent for the lowest. The value per acre for these groups ranged from $31 for the first group to $21 for the lowest group. In these groups also the percentage of loans foreclosed increased consistently between the group of highest and lowest rating while the proportion of the loans in good standing decreased thereby indicating disproportionate valuation between groups.

Topography.—Topography exerts an important influence upon the agricultural use of the soil, necessitating the division of soil types into topographic phases, consisting of variations in surface relief ranging from nearly level to hilly. The first phase, level to undulating land, has slight to gentle slopes, unbroken by ridges or deep depressions, and is the most desirable for agricultural purposes, being well adapted to the use of large-scale machinery. Land classed as mixed undulating and rolling usually consists of local areas of both phases. Some farms falling into this class have excellent topography, while others are moderately rough. All are very valuable agriculturally. For the purpose of this study the two above classes were combined under the title "level". Gently to moderately rolling land is characterized by a succession of ridges and knolls, separated by lower areas that frequently contain poorly-drained depressions or sloughs. With similar soils, this phase is distinctly inferior to that classified as level to undulating in ease of cultivation, moisture-holding capacity, and soil uniformity. Strongly rolling to hilly phases, which make up the fourth class, are so rough and steep that cultivation is almost impossible. Such land is best used for pasture.

Sorting the loans into three groups according to topography, it was found that by 1929, 8·3 per cent of the loans in the group classified as "level", 10·6 per cent of those classified as "moderately rolling", and 15·1 per cent of the loans on "hilly" farms were foreclosed (table 35). At the same time the percentage of the loans in good standing varied from 23·3 per cent for the "level"

1 In obtaining this figure for average yield the long-time average municipal yield was taken as the average for each farm within that municipality. A similar method was used in calculating variability of yield.

group to 15·4 per cent for those classified as "hilly". The indebtedness in 1929 as a percentage of the original loan also varied directly with topography being 97·6 per cent for the "level" class and 101·2 per cent for the "hilly" land.

TABLE 5.—RELATION OF TOPOGRAPHY TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1929

Topography	Number reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Loan per farm (dollars)	Loan in per cent of appraised value	Per cent in good standing	Debt in 1929 in per cent of original loan	Per cent foreclosed
Level	2,615	314,9	25·72	3·083	38·1	23·3	97·6	8·3
Moderately rolling	992	280·9	20·79	2·246	38·5	19·7	99·0	10·6
Hilly	298	277·7	17·46	1,820	37·5	15·4	101·2	15·1
Total or average	3,905	303·7	24·04	2,694	38·2	21·8	98·0	9·4

In studying the status of loans in 1935 on the same basis, almost identical results were obtained. At that time the percentages of loans foreclosed and in good standing, and the debt in 1935 as a percentage of the original loan were all closely related to the topography (table 6).

The fact that topography was one of the factors considered by the loan inspectors in arriving at the appraised value of farms in Saskatchewan is indicated by the variation in average appraised value per acre for the different topographical classes. The average appraised value per acre within the group classified as level was about $26, that for the moderately rolling group $21, and for those having hilly topography, $17. That this differential was not sufficient to make up for the difference in income is indicated by the variation in the proportion of loans foreclosed and in good standing between these different groups as referred to above.

TABLE 6.— RELATION OF TOPOGRAPHY TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1935

Topography	Number reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Loan per farm (dollars)	Loan in per cent of appraised value	Per cent in good standing	Debt in 1935 in per cent of original loan	Per cent foreclosed
Level	3,710	332·7	25·20	3,013	36·2	6·4	117·5	19·3
Moderately rolling	1,295	301·5	21·10	2,351	37·0	4·1	121·8	19·5
Hilly	386	317·1	17·28	2,003	36·5	3·4	122·0	24·6
Total or average	5,391	324·1	23·76	2,792	36·4	5·7	118·6	19·8

It is estimated that 77 per cent of the land in the Province of Saskatchewan which has been covered by the soil survey was classified in the group referred to as level, 17 per cent was classified as moderately rolling, and 6 per cent as hilly.[1] The failure of the loan inspectors to discriminate sufficiently against land of rougher topography is indicated by the fact that, according to the sample for which the information was available, only about 68 per cent of their loans were on farms classified as "level" while 24 per cent fell in the "moderately rolling" class and about 8 per cent in the "hilly" group. That is, more than a proportionate share of the loans were on land of poor topography.

[1] Soils Survey Report No. 10, University of Saskatchewan, Table 17, p. 117.

Land Class.—As a result of a land utilization survey carried on in the south central part of Saskatchewan during the years 1936-38 by the Dominion Department of Agriculture in co-operation with the University of Saskatchewan, the land in municipalities has been classified according to its suitability for wheat production. Land Class I may be described as being submarginal, Land Class II as marginal, Land Class III as fair, Land Class IV as good and Land Class V as excellent for wheat production.[1]

TABLE 7.—RELATION OF LAND CLASS TO MORTGAGE FORECLOSURES AND OTHER FACTORS IN SOUTH CENTRAL SASKATCHEWAN, 1929

Land class	Number reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Loan per farm (dollars)	Loan in per cent of appraised value	Per cent in good standing	Debt in 1929 in per cent of original loan	Per cent foreclosed
I	86	284·5	15·75	1,648	36·8	7·0	105·1	19·7
II	172	281·0	18·03	1,802	35·5	12·2	99·3	5·8
III	207	316·8	22·71	2,720	37·8	15·0	97·5	2·9
IV	84	342·9	29·65	3·746	36·8	16·7	96·6	3·6
V	5	448·0	38·75	6·500	37·4	40·0	91·8	0·0
Total or average	554	306·7	21·95	2,847	36·9	13·4	98·2	6·5

A very close relationship between land class and success of loan is shown in tables 7 and 8 for both 1929 and 1935. Because the number of loans in Land Class V is too small for the results to be significant, that class will be omitted from the analysis. The hazard connected with loans on Land Class I is indicated by the fact that in both 1929 and 1935 about 20 per cent were foreclosed, while on Class IV land less than 4 per cent were foreclosed. Similarly it may be noted that while over 16 per cent of the loans made on Class IV land were in good standing in 1929, only 7 per cent of those on Land Class I were up to date on their payments. Likewise in 1929 the amount owing on current loans made on Land Class I amounted to 5 per cent more than originally borrowed while on Land Class IV the amount owing had been reduced by about 4 per cent.

TABLE 8.—RELATION OF LAND CLASS TO MORTGAGE FORECLOSURES AND OTHER FACTORS IN SOUTH CENTRAL SASKATCHEWAN, 1935

Land class	Number reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Loan per farm (dollars)	Loan in per cent of appraised value	Per cent in good standing	Debt in 1935 in per cent of original loan	Per cent foreclosed
I	84	334·2	16·03	1,900	35·5	0·0	131·9	21·4
II	212	293·9	18·19	1,885	35·2	0·9	132·2	12·3
III	351	325·8	23·63	2,807	36·4	1·1	129·7	9·1
IV	161	347·1	28·77	3,448	34·8	1·9	128·0	3·7
V	12	358·3	36·60	4,833	36·8	0·0	111·8	0·0
Total or average	820	323·5	23·08	2,631	35·6	1·1	129·3	10·0

The fact that the inspectors recognized the superior qualities of the farms on the better classes of land is indicated by the higher value per acre attaching to them, the average value per acre of Land Class IV being almost double that

[1] For a detailed description of land classes see C. C. Spence and E. C. Hope "An Economic Classification of Land in Fifty-six Municipal Divisions, South Central Saskatchewan, Dominion Department of Agriculture Technical Bulletin 36."

of Land Class I. The failure of so many loans on the inferior classes of land, however, shows that the spread between the values placed on land of high and low quality was not sufficiently great.

Size of Farm.—One of the most effective ways of increasing net returns in almost all types of enterprise is by increasing the size of the unit. This increased return is obtained not only by multiplying the per unit profit by the addition of extra units, but also as a result of increased efficiency, arising out of the fact that certain fixed or overhead costs do not increase at the same rate as the volume of production. This is particularly true in the case of wheat farming to which machine production has become so well adapted. The relation of size of business to operators earnings in 137 farm management surveys carried on in the United States between 1911 and 1936 showed that under normal conditions as size of business increased, operator's earnings increased.[1] Variations in this general relationship were obtained under the following conditions: A falling price level, low rates of crop and animal production, and poor labour efficiency. For those studies in which the records were sorted on acres in farm, it was found that in over 80 per cent of the cases operators' earnings increased with an increase in size of farm.[2]

A number of measures of size of farm may be used. Under Saskatchewan conditions where wheat is the principal source of income the acreage of land in wheat gives a good measure of size. In a study of the relation of size of farm as measured by acreage in wheat to labour income on 119 Belbeck area farms, the average labour income varied from $441 for the group having less than 100 acres to $5,882 for the highest group in which 350 acres and over were in wheat.[3] Similar results were obtained in a study of 106 Melfort area farms which were sorted by acres of cropland. The average labour income ranged from $909 for the smallest farms to $7,795 for the group having the largest farms.[4]

Through its effect on operator's profits, size of business is also an important factor in determining the success of loans. On sorting the loans in force in 1929 by acres mortgaged, it was found that as the size of farm increased the percentage of the loans foreclosed decreased (table 9). In the group of under 200

TABLE 9.—RELATION OF SIZE OF FARM TO PERCENTAGE OF LOANS FORECLOSED AND OTHER FACTORS, 1929

Acres mortgaged	Number reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Loan per farm (dollars)	Loan in per cent of appraised value	Per cent in good standing	Debt in 1929 in per cent of original loan	Per cent foreclosed
Under 200.....	1,902	159·3	19·58	1,170	37·5	23·3	99·1	12·8
200–399.....	1,541	318·0	23·15	2,842	38·6	20·8	97·9	6·7
400–599.....	329	479·4	24·65	4,553	38·5	22·8	98·9	5·5
600 and over.....	353	729·5	28·33	7,781	37·6	24·1	96·8	4·2
Total or average	4,125	298·3	23·64	2,659	38·1	22·4	98·0	9·2

acres 12·8 per cent of the loans were foreclosed, while in the group 600 acres and over 4·2 per cent of the loans were foreclosed. A somewhat higher proportion of the loans on the larger farms also were in good standing in 1929 than of those in the smaller size groups.

[1] Smith, B. Q., "The Relation of Size of Business to Operators' Earnings", Masters Thesis, Cornell University, 1936.

[2] Ibid.

[3] Allen, Wm., "The Farm Business in Saskatchewan", University of Saskatchewan Agr. Ext. Bul. No. 37, 1927.

[4] Allen, Wm., "The Farm Business in Saskatchewan", University of Saskatchewan Agr. Ext. Bul. No. 43, 1928.

A similar relationship between size of farm and foreclosures was found to exist in 1935 when the percentage of the loans foreclosed varied from 23·3 per cent for the group of farms of less than 200 acres to 14·2 per cent for the group of 600 acres and over (table 10). In 1935, however, an inverse relationship was obtained between size of farms and percentage of the loans in good standing. This was due to the fact that in the adverse years preceding 1935 the larger farms, because of their greater fixed costs, found it harder to balance their budgets and meet their financial obligations. For the same reason the amount owing in 1935 in per cent of the original loan was slightly higher in the case of the larger farms.

TABLE 10.—RELATION OF SIZE OF FARM TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1935

Acres mortgaged	Number reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Loan per farm (dollars)	Loan in per cent of appraised value	Per cent in good standing	Debt in 1935 in per cent of original loan	Per cent foreclosed
Under 200	2,262	159·3	20·22	1,173	36·4	9·8	112·2	23·3
200–399	2,261	318·0	23·85	2,787	36·8	4·9	118·3	17·8
400–599	591	478·0	23·91	4,120	36·1	4·6	120·9	12·5
600 and over	565	714·0	24·90	6,238	35·1	2·5	119·8	14·2
Total or average	5,679	317·9	23·42	2,692	36·4	6·6	118·1	19·1

In contrast to the above findings, Dr. F. F. Hill reports in Cornell University Agricultural Experiment Station Bulletin 549 that, "The number of foreclosures on small farms in New York was negligible."[1] The explanation advanced for this relationship was the relatively high residential value attaching to small farms in the Northeastern United States where the income from the farm was usually supplemented by that from some outside source, together with the fact that small acreage did not necessarily mean small volume of business. In Saskatchewan, however, the residential value of farms is relatively low and the possibility of intensive farming is very limited. Under such conditions the farm must yield sufficient income to meet all overhead charges including necessary family living expenses before any payment can be made on interest or principal. It is evident, therefore, that to have any value for loan purposes a farm must exceed a certain minimum size. Farms below that size may give the family a living but will yield no surplus income to repay loans. Since this minimum size varies according to type of farming and location, it is not possible to define any specific limits. Generally speaking, under Saskatchewan conditions, that limit would seem to be about one-half section, although under some conditions and particularly in the northern parts of the province the minimum may be considerably lower.

Appraised Value of Farm per Acre.—The appraised value per acre of the land mortgaged provides a rough index of quality, both as regards earning capacity and desirability of location. While different appraisers may place different valuations on the same farms, on the average those farms which are valued at less than $10 per acre are less desirable properties than those valued at $10 to $15 per acre and so on. This fact is indicated by the relationship between appraised value per acre and foreclosures as shown in tables 11 and 12. In 1929, the percentage of loans foreclosed ranged from 16·1 per cent for farms valued at less than $10 per acre to 4·9 per cent for those valued at $25 and over per acre, while in 1935 the range extended from 30·4 per cent to 16·1 per cent,

[1]Hill, F. F., An Analysis of the Loaning Operations of the Federal Land Bank of Springfield. Cornell Agr. Exp .Sta. Bul. 549, p. 39.

respectively, for the same groups. There was no significant relationship between value of farm per acre and percentage of loans in good standing in 1929, but in 1935 an inverse relationship was indicated. The percentage of loans in good standing increased from 1·7 per cent for the first group for which the value per acre was less than $10 to 4·4 per cent for the group of farms valued at $25 and over per acre.

TABLE 11.—RELATION OF VALUE OF FARM PER ACRE TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1929

Dollars per acre	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1929 in per cent of original loan	Per cent of loans foreclosed
Under 10	279	220·3	8·12	21·1	100·8	16·1
10–14	633	238·9	12·35	25·0	100·8	13·1
15–19	918	265·5	16·99	23·1	99·5	11·1
20–24	853	305·0	21·86	21·9	98·9	7·3
25 and over	1,508	346·9	31·88	22·1	96·8	4·9
Total or average	4,191	297·9	23·64	22·6	97·9	8·7

TABLE 12.—RELATION OF VALUE OF FARM PER ACRE TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1935

Dollars per acre	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1935 in per cent of original loan	Per cent of loans foreclosed
Under 10	289	241·5	8·36	9·7	110·8	30·4
10–14	759	271·6	12·41	11·2	111·3	23·3
15–19	1,204	300·8	17·06	7·5	116·7	21·0
20–24	1,252	330·8	21·70	6·1	119·4	16·3
25 and over	2,127	342·5	31·41	4·4	119·0	16·1
Total or average	5,631	317·7	23·42	6·6	118·1	18·9

Similar results were obtained when the loans were grouped according to the value of farm per acre cultivated. Experience goes to show that good land is essential to outstanding success in farming and that poor land may be dear at any price.

Wheat Yield per Acre.—Payments on loans must be made from that part of the farm earnings remaining after the essential operating expenses, including family living, have been met. Since on most Saskatchewan farms wheat is the major source of income the principal factor determining gross farm income is the yield of wheat per acre. Due to the lack of long-term yield data on individual farms, the municipal long-term average yield was applied to each farm within that municipality. While this method does not make allowances for variation in yield between individual farms, broad differences resulting from climatic variations are given due weight.

Sorting the loans on the basis of the average municipal yields it was found that while in 1929 the percentage of the loans foreclosed was 10 per cent for both the group having an average yield of less than 12 bushels of wheat per acre and that between 12 and 16 bushels, it was only 6·4 per cent in the last group where yields were 16 bushels and over (table 13). The percentage of the loans in good standing increased from 19·5 per cent for the lowest yield group to 28·6 per cent for the group with yields of 16 bushels and over. In 1935 the percentage of the loans foreclosed varied from 21·1 per cent in the first group to 15·4 per

TABLE 13.—RELATION OF YIELD OF WHEAT PER ACRE TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1929

Bushels of wheat per acre	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1929 in per cent of original loan	Per cent of loans foreclosed
Under 12	945	325·0	24·54	19·5	97·8	10·3
12–15·9	2,098	313·3	24·95	20·9	97·9	10·1
16 and over	929	248·0	20·09	28·6	98·6	6·4
Total or average	3,972	300·3	23·88	22·4	98·0	9·2

cent in the high yield group, while the percentage of the loans in good standing ranged from 1·5 per cent to 16·6 per cent, respectively, for the same groups (table 14).

TABLE 14.—RELATION OF YIELD OF WHEAT PER ACRE TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1935

Bushels of wheat per acre	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1935 in per cent of original loan	Per cent of loans foreclosed
Under 12	1,477	348·8	23·31	1·5	124·4	21·1
12–15·9	2,846	330·3	24·65	4·6	118·7	19·6
16 and over	1,162	262·3	20·96	16·6	106·2	15·4
Total or average	5,485	320·1	23·60	6·3	118·3	19·1

Variability of Wheat Yield.—In considering crop yields in Saskatchewan it is necessary not only to consider the long-term average yield but also the variation in yield from year to year. The variation in municipal average yields was studied and the resulting percentages of variability applied to each farm located within the municipality. The relation of variability of yield to status of loan is presented in tables 15 and 16. For the period up to 1929 the percentage of the loans foreclosed increased from 6·4 per cent for the group having a coefficient of variability of less than 30 per cent to 12·3 per cent for the group having a variability of 70 per cent or more. At the same time, while 32 per cent of the loans falling within the group having a low variability of yield were in good standing, only 20 per cent of those in the group of highest variability were in good standing. Similar relationships are shown for 1935. Notwithstanding this record of experience those farms which had the lowest variability of yield were valued at a lower level than those of high variability.

TABLE 15.—RELATION OF VARIABILITY OF WHEAT YIELD TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1929

Coefficient of variability	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1929 in per cent of original loan	Per cent of loans foreclosed
Under 30	362	232·2	17·63	31·5	98·4	6·4
30–49	1,313	295·4	25·38	23·5	98·6	7·1
50–69	1,843	310·9	23·97	20·3	97·7	10·6
70 and over	454	328·9	23·16	19·8	97·0	12·3
Total or average	3,972	300·3	23·88	22·4	98·0	9·2

TABLE 16.—RELATION OF VARIABILITY OF WHEAT YIELD TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1935

Coefficient of variability	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1935 in per cent of original loan	Per cent of loans foreclosed
Under 30	446	243·0	18·27	16·6	104·5	16·4
30–49	1,738	310·8	25·03	10·9	112·8	17·4
50–69	2,518	333·1	23·58	2·9	120·9	20·5
70 and over	783	345·3	22·94	1·1	127·0	19·8
Total or average	5,485	320·1	23·60	6·3	118·3	19·1

Appraised Value of Farm.—A factor which combines size and quality in farms is the appraised value. When the loans are sorted according to appraised value, it may be noted that in the higher value groups both acres in farm and appraised value per acre are higher than in the lower value groups (table 17). The relationship between appraised value per farm and success of loans is shown by the fact that while 14·3 per cent of the loans on farms appraised at less than

TABLE 17.—RELATION OF APPRAISED VALUE OF FARM TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1929

Appraised value in dollars	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1929 in per cent of original loan	Per cent of loans foreclosed
Under 4,000	1,556	173·0	14·75	23·9	99·1	14·3
4,000– 7,999	1,288	271·1	20·42	21·5	99·6	6·5
8,000–11,999	675	356·3	26·23	20·0	97·8	6·8
12,000–15,999	254	483·6	27·85	19·7	98·0	3·1
16,000 and over	307	687·4	33·50	26·7	95·7	2·3
Total or average	4,080	297·9	23·64	22·5	97·9	9·0

$4,000 were foreclosed by 1929, only 2·3 per cent of those appraised at $16,000 or over were foreclosed. Similar results were obtained in the analysis of the loans in force in 1935, 25 per cent of those in the first group being foreclosed while in the group having appraised values of $12,000 to $16,000, foreclosures accounted for only 10·7 per cent (table 18). In the last group having appraised values of $16,000 and over foreclosures increased to 16·1 per cent of all loans. No significant relationship between appraised value and percentage of loans in good standing could be discerned in 1929, although in 1935 there was a definite inverse correlation between these two factors, 10·6 per cent of the loans in the first group and 2·9 per cent of those in the group of largest farms being in good standing. No definite relationship between appraised value and the indebtedness in terms of the original loan was apparent in either of these years.

TABLE 18.—RELATION OF APPRAISED VALUE OF FARMS TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1935

Appraised value in dollars	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1935 in per cent of original loan	Per cent of loans foreclosed
Under 4,000	1,792	173·1	15·04	10·6	109·7	25·0
4,000 –7,999	1,828	278·4	20·21	6·1	117·3	17·1
8,000–11,999	1,139	379·7	24·98	3·8	119·9	16·4
12,000–15,999	487	495·0	27·21	3·3	121·3	10·7
16,000 and over	384	682·7	32·16	2·9	118·7	16·1
Total or average	5,630	317·7	23·42	6·6	118·1	18·9

Appraised Value of Buildings.—Buildings make up a much smaller part of the value of a farm in Saskatchewan than in the other provinces of the Dominion. According to the Census of 1931 the value of farm buildings in Saskatchewan was equal to about 23 per cent of the value of both land and buildings while in Canada as a whole buildings made up 33 per cent of the value of farm real estate. In Nova Scotia, buildings equalled 53 per cent of the combined value of land and buildings. Such a variation is largely due to type of farming, dairying and live stock production requiring a much more elaborate set of buildings than grain growing. The longer period of establishment as well as the higher value for residential purposes also have been factors in the greater investment in farm buildings in Eastern Canada. In discussing buildings on farms in the Alameda district of Saskatchewan, Dr. Allen stated, "The earliest buildings were usually small and of inexpensive construction. When prosperity increased, the small and inadequate buildings were superseded by larger and more expensive structures. The amount of building construction is a fair index of the prosperity of a developing community. Following one or more profitable crops, there is usually a considerable amount of new building taking place on the farms."[1] The relative condition of buildings between farms also reflects to a considerable degree the relative profitableness of those farms.

This is indicated in a study of the relation of the appraised value of buildings to status of loans. In 1929, 15·9 per cent of the loans on farms having buildings

TABLE 19.—RELATION OF APPRAISED VALUE OF BUILDINGS TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1929

Appraised value of buildings in dollars	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1929 in per cent of original loan	Per cent of loans foreclosed
Under 500	1,311	220·1	18·04	22·0	100·1	15·9
500– 999	876	251·2	19·01	22·7	98·3	10·2
1,000–1,499	541	284·2	22·40	22·0	99·4	5·2
1,500–1,999	365	321,9	24·51	21·9	97·0	4·9
2,000 and over	916	436·7	29·75	23·7	97·0	2·6
Total or average	4,009	298·4	23·64	22·5	98·0	9·2

valued at less than $500 were foreclosed, while on those farms having buildings valued at $2,000 or over, only 2·6 per cent of the loans were foreclosed (table 19). As the value of buildings increases between groups both the appraised value per acre and the size of farm increases, thus indicating a close relationship between the value of buildings and the size and quality of the farm. Similar relationships of a less striking nature were indicated in 1935 (table 20).

TABLE 20.—RELATION OF APPRAISED VALUE OF BUILDINGS TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1935

Appraised value of buildings in dollars	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1935 in per cent of original loan	Per cent of loans foreclosed
Under 500	1,942	256,6	19·69	8·4	115·8	23·9
500– 999	1,218	287·2	19·67	8·2	114·8	19·8
1,000–1,499	806	326·1	22·46	6·0	120·0	16·1
1,500–1,999	507	341·0	24·90	5·7	119·6	14·0
2,000 and over	1,092	437·0	29·40	2·8	120·5	14·7
Total or average	5,565	318·4	23·41	6·7	118·3	19·2

[1] Allen, William, The Farm Business in Saskatchewan, University of Saskatchewan, Agr. Ext. Bul. No. 46, p. 36.

Location of Farm.—The relation of location of farm with respect to market and community centre or church to foreclosures in 1929 is presented in tables 21 and 22. Little significant relationship is shown between distance of farm from market and the proportion of the loans in good standing. However, the percentage of the loans foreclosed was greater with increased distance to market. In the case of loans on farms less than 5 miles from market, 2·8 per cent were foreclosed by 1929 while 4·2 per cent of the loans on farms situated 15 miles or more from market were foreclosed. This is probably due for the most part to the advantage of smaller marketing costs as reflected in a higher net income.

TABLE 21.—RELATION OF DISTANCE TO MARKET TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1929

Miles to market	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1929 in per cent of original loan	Per cent of loans foreclosed
Under 5	880	326·1	27·43	26·3	94·2	2·8
5–10	988	291·3	24·06	21·5	96·5	3·0
10–15	429	264·5	21·20	22·6	97·2	4·0
15 and over	455	236·8	14·42	25·9	94·2	4·2
Total or average	2,752	289·4	23·57	23·9	95·5	3·3

A similar relationship was found to exist between the location of farms with respect to church or community centre and foreclosures (tables 23 and 24). Of the farms located within 5 miles of the community centre, 3·1 per cent were

TABLE 22.—RELATION OF DISTANCE TO MARKET TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1935

Miles to market	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1935 in per cent of original loan	Per cent of loans foreclosed
Under 5	883	325·2	27·45	5·4	114·3	14·7
5–10	989	288·3	23·98	7·1	116·0	15·6
10–15	429	259·8	21·04	6·8	117·5	14·7
15 and over	456	234·6	14·33	12·1	108·7	14·9
Total or average	2,757	286·8	23·51	7·3	114·8	15·1

foreclosed while of those farms located more than 10 miles distant, 4·5 per cent were foreclosed. A somewhat higher percentage of the group of loans on farms located closest to the community centre were also in good standing. Since churches and community centres are usually located where the first settlement occurs, which is usually on the more choice land, it is probable that the smaller

TABLE 23.—RELATION OF DISTANCE TO CHURCH OR COMMUNITY CENTRE TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1929

Miles to church	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1929 in per cent of original loan	Per cent of loans foreclosed
Under 5	1,414	294·8	24·59	25·2	95·1	3·1
5–10	777	304·8	24·32	22·7	96·3	3·5
10 and over	223	266·7	20·66	22·4	97·7	4·5
Total or average	2,414	294·6	24·20	24·2	95·5	3·4

proportion of foreclosures on farms located closest to their community centre is due in large part to superior soils. A second factor which will also exert some influence in the case of farms located close to market and community centre is that a greater effort would be made to hold a farm having residential advantages than one which is less desirable in this respect.

TABLE 24.—RELATION OF DISTANCE TO CHURCH OR COMMUNITY CENTRE TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1935

Miles to church	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1935 in per cent of original loan	Per cent of loans foreclosed
Under 5	1,147	295·8	24·44	6·8	114·9	15·0
5–10	778	294·8	24·69	6·7	115·9	15·6
10 and over	224	259·0	19·96	7·1	115·6	19·2
Total or average	2,419	292·2	24·17	6·8	115·3	15·6

Time and Method of Acquiring Farms.—Over 70 per cent of the property given as security for loans was acquired between 1900 and 1915. About 20 per cent of the farms were obtained between 1915 and 1920 while those farms which were acquired since 1920 make up about 6 per cent of the total. The principal method of acquisition was homestead and pre-emption, about 56 per cent of the farms being acquired by this method while about 13 per cent were obtained by homesteading combined with purchase. Cash purchases accounted for 7 per cent while 20 per cent were purchased by cash and agreement of sale. No significant relationship could be discerned between the method of acquisition and foreclosures.

TABLE 25.—RELATION OF YEAR PROPERTY ACQUIRED TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1929

Year property acquired	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1929 in per cent of original loan	Per cent of loans foreclosed
1900–1915	1,838	284·0	23·49	24·5	94·5	2·8
1915–1920	532	274·0	23·77	26·3	95·7	1·7
1920 and later	140	337·2	23·93	25·0	99·9	0·7
Total or average	2,510	289·1	23·71	24·7	95·2	2·5

The relation of the year property was acquired to success of loans is shown in tables 25 and 26. In 1929 a greater proportion of the loans made on property acquired before 1915 were foreclosed than of those on property acquired more

TABLE 26.—RELATION OF YEAR PROPERTY ACQUIRED TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1935

Year property acquired	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1935 in per cent of original loan	Per cent of loans foreclosed
1900–1915	1,840	281·1	23·44	7·7	113·8	13·2
1915–1920	532	273·8	23·76	8·1	114·1	13·0
1920 and later	143	330·0	23·61	8·4	121·5	21·7
Total or average	2,515	285·3	23·66	7·7	114·6	13·7

recently. By 1935, however, a greater proportion of the loans on properties acquired since 1920 were foreclosed. This is probably due to the fact that the debt on the more recently acquired farms in terms of the original loans was greater than that on farms which had been operated throughout the period of high prices.

Age of Loan.—The relation of age of loans to foreclosures is shown in tables 27 and 28. The smallest proportion of foreclosures occurred among the more mature group of loans which having been in force during several years of good farm income were in a better position than those loans which had been in force for a shorter period.

TABLE 27.—RELATION OF AGE OF LOAN TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1929

Age of loan (years)	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1929 in per cent of original loan	Per cent of loans foreclosed
Under 5	1,112	361·9	24·70	30·5	101·2	7·0
5–10	1,716	298·6	24·72	17·9	96·1	16·8
10 and over	1,263	240·4	20·75	21·4	96·3	5·1
Total or average	4,091	297·4	23·66	22·4	97·9	10·6

Due to the fact that sufficient time had not elapsed to allow enough accumulation of arrears to bring about foreclosure, relatively few of the loans in force for less than 5 years were foreclosed. The highest percentage of foreclosures had occurred among loans in force from 5 to 10 years in 1929 and in 1935 among those in force from 5 to 15 years.

TABLE 28.—RELATION OF AGE OF LOAN TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1935

Age of loan (years)	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1935 in per cent of original loan	Per cent of loans foreclosed
Under 5	1,040	376·4	22·99	8·1	115·6	12·1
5–10	1,909	346·3	24·01	5·4	127·4	21·1
10–15	1,057	338·0	25·51	2·9	116·0	39·9
15 and over	1,633	244·8	21·75	9·3	108·5	7·7
Total or average	5,639	317·6	23·41	6·6	118·1	19·1

The "Personal Factor" in Relation to Success in Farming.—It is generally conceded that the most important single factor determining success in farming is the farmer himself, commonly referred to as the "personal factor". In this connection the statement is frequently heard that a large loan may be made to a good farmer on a good farm but that no loan should be made to a poor farmer on any kind of a farm. Results of a study of the relation of variations in the human factor to financial returns in farming which was carried on by the University of Minnesota in co-operation with the Bureau of Agricultural Economics in 1930 show the importance of such factors as the wife's co-operation, method of acquiring the farm, age of operator and such inherent differences as mental alertness, ambition and interest in the work as affecting farm income.[1] Studies elsewhere have shown a relationship between previous

[1] Wilcox, W. W., Andrew Boss and George A. Pond, "Relation of Variation in the Human Factor to Financial Returns in Farming", Minn. Agr. Exp. Sta. Bul. 288, 1932.

TABLE 29.—RELATION OF OCCUPANT OF FARM TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1929

Occupant	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1929 in per cent of original loan	Per cent of loans foreclosed
Owner	530	369·0	25·44	25·8	99·7	0·4
Tenant or Manager	75	415·4	25·36	28·0	102·2	2·7
Total or average	605	374·8	25·43	26·1	100·0	0·7

experience and education of operator, nationality, and size of family.[1] The relation of a number of these factors to status of loan in 1929 and 1935 is given in the following section.

Occupant of Farm.—Unlike many similar Acts the Saskatchewan Farm Loan Act did not limit loans to those actively engaged in farming. Of those loans for which the information was obtained, 12·6 per cent were made to absentee owners whose farms were operated by tenants or hired managers. The higher degree of risk associated with such loans is indicated by the fact that while the proportion of the loans made to owner operators which were foreclosed amounted to 0·4 per cent in 1929 and 8·3 per cent in 1935, the percentage of those made to absentee owners which were foreclosed amounted to 2·7 and 13·2 per cent, respectively (tables 29 and 30).

TABLE 30.—RELATION OF OCCUPANT OF FARM TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1935

Occupant	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1935 in per cent of original loan	Per cent of loans foreclosed
Owner	530	369·4	25·44	4·2	125·5	8·3
Tenant or Manager	76	424·5	25·96	6·6	126·8	13·2
Total or average	606	376·1	25·52	4·5	125·7	8·9

Borrower's Financial Character.—One of the most important "personal factors" associated with risk of loan is the record of the farmer with regard to previous financial obligations. In an attempt to obtain information on this point the inspectors were required to give each applicant a rating as to "financial character". The value of this information was minimized by the tendency to use the classification "moderately good" for most applicants. Of those loans for which information on the financial character of applicant was

TABLE 31.—RELATION OF BORROWER'S FINANCIAL CHARACTER TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1929

Financial character of owner	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1929 in per cent of original loan	Per cent of loans foreclosed
Very good	96	384·5	29·11	29·2	99·1	.....
Moderately good	1,379	309·0	24·66	26·0	95·3	1·7
Fair or poor	144	288·0	19·68	19·4	97·0	2·1
Total or average	1,619	311·7	24·58	25·6	95·7	1·6

[1] Warren, S. W., "An Economic Study of Agriculture in Northern Livingston County, New York." Cornell Agr. Exp. Sta. Bul. 539, 1932.

available, 85 per cent were classified as moderately good. Tables 31 and 32 show a direct relationship between the financial character of the owner as given by the inspectors and the status of the loan both as regards foreclosures and loans in good standing. In 1929 loans to borrowers having "very good" financial characters showed no foreclosures, while in the "moderately good" and "fair to poor" classes foreclosures accounted for 1·7 and 2·1 per cent of the loans, respectively. For the same year the percentage of the loans in good standing ranged from 29·2 for the group with a "very good" financial character to 19·4 per cent for the group having a "fair to poor" character. A similar trend was shown for 1935. The percentage of the loans foreclosed ranged from 11·5 to 15·3 for the extreme groups. The percentage in good standing ranged from 7·3 for the "very good" group to 4·2 for the "fair to poor" group.

TABLE 32.—RELATION OF BORROWER'S FINANCIAL CHARACTER TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1935

Financial character of owner	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1935 in per cent of original loan	Per cent of loans foreclosed
Very good	96	380·4	28·99	7·3	124·8	11·5
Moderately good	1,382	308·1	24·64	7·2	114·8	12·4
Fair or poor	144	280·2	19·30	4·2	129·0	15·3
Total or average	1,622	310·0	24·54	7·0	116·6	12·6

Age of Borrower.—Study in relation of age of borrower and success of loan indicates that there is no significant difference in the status of loans held by borrowers who were between 30 and 60 years of age when loan was obtained (tables 33 and 34). However, due probably to the lack of financial reserves as well as inexperience, a relatively high proportion of the loans made to men under 30 years of age were foreclosed. While in 1929 relatively few loans made to men over 60 years of age had been foreclosed, by 1935 this proportion was quite high relative to the other age groups. This trend is probably due to the fact that by 1935 many of the original borrowers would have died or would be incapacitated by advanced years, leaving the farm without the expert management necessary for successful operations.

TABLE 33.—RELATION OF AGE OF BORROWER TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1929

Age of borrower (years)	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1929 in per cent of original loan	Per cent of loans foreclosed
Under 30	251	232·9	20·19	18·3	95·8	5·2
30–40	770	263·5	22·29	23·9	96·3	1·8
40–50	679	311·5	24·53	27·0	95·0	1·8
50–60	319	356·1	26·34	25·1	96·0	1·9
60 and over	147	363·2	25·17	27·9	99·1	1·4
Total or average	2,166	295·7	23·81	24·7	96·0	2·2

Marital Status of Borrower.—The relation of the marital status of the owner and the status of the loans in 1929 and 1935 is presented in tables 35 and 36. The importance of the co-operation of the farmer's wife which was listed next to experience in farming as the most important factor contributing to financial success in farming,[1] is also shown to be great in the repayment of

[1] Wilcox, W. W., Andrew Boss, and George A. Pond, "Relation of Variations in the Human Factor to Financial Returns in Farming," Minn. Agr. Exp. Sta. Bul. 288, 1932.

TABLE 34.—RELATION OF AGE OF BORROWER TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1935

Age of borrower (years)	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1935 in per cent of original loan	Per cent of loans foreclosed
Under 30	251	226·0	19·90	6·8	117·5	19·1
30–40	771	261·8	22·16	8·2	114·3	13·4
40–50	681	311·2	24·69	7·6	116·8	12·0
50–60	319	347·3	25·90	8·2	116·6	12·5
60 and over	147	378·5	25·39	4·8	119·9	18·4
Total or average	2,169	294·0	23·76	7·6	116·3	13·8

mortgage indebtedness. By 1929 only 1·8 per cent of the loans obtained by married men had been foreclosed while 2·4 per cent of those held by single men and 3·5 per cent of those held by widows and widowers were foreclosed. Similar results were obtained for 1935 when the percentage of the loans foreclosed was 13·2 for the married borrowers, 14·4 for the single and 15·3 for the widowed.

For those loans which had not been foreclosed a somewhat different situation existed since for both years studied not only was a higher percentage of the loans obtained by single men in good standing but the amount owing on current loans in proportion to the original loans was also smaller than for the other groups. This is probably due to the fact that owing to their smaller responsibilities single men are able to make a greater payment on their loans

TABLE 35.—RELATION OF MARITAL STATUS OF BORROWER TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1929

Marital status	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1929 in per cent of original loan	Per cent of loans foreclosed
Married	1,650	307·5	24·69	24·4	96·2	1·8
Single	425	248·1	19·94	26·4	93·8	2·4
Widowed	85	306·6	22·54	20·0	98·5	3·5
Total or average	2,160	295·8	23·82	24·6	96·0	2·0

under adverse circumstances than men having families to maintain. Of the number of loans for which the information was available, 76 per cent were made to married men while 20 per cent were to single men and 4 per cent to widows and widowers.

TABLE 36.—RELATION OF MARITAL STATUS OF BORROWER TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1935

Marital status	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1935 in per cent of original loan	Per cent of loans foreclosed
Married	1,653	305·6	24·68	6·4	117·1	13·2
Single	425	247·0	19·83	11·8	110·3	14·4
Widowed	85	302·9	21·88	7·1	121·3	15·3
Total or average	2,163	294·1	23·77	7·5	116·4	13·5

Number in Borrower's Family.—The effect of size of family on risk of loan is shown in tables 37 and 38. In the group of borrowers having no children at the time loans were made, 2·8 per cent of the loans were foreclosed by 1929

TABLE 37.—RELATION OF NUMBER IN BORROWER'S FAMILY TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1929

Number in family	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1929 in per cent of original loan	Per cent of loans foreclosed
0	640	255·9	20·93	26·3	94·3	2·8
1, 2	550	294·4	24·00	23·6	96·5	2·4
3, 4	414	322·7	25·21	25·1	97·2	1·7
5, 6	170	337·5	27·56	24·1	94·7	0·6
7 and over	120	358·7	26·30	16·7	98·3	1·7
Total or average	1,894	295·7	23·95	24·4	96·1	2·2

and 14·5 per cent by 1935. As the size of family increased, the proportion of the loans which were foreclosed decreased up to the group having 5 to 6 children, in which 0·6 per cent of the loans were foreclosed by 1929 and 11·1 per cent by 1935. In the last group having 7 or more children a reversal of the above trend occurred, the proportion of loans foreclosed being 1·7 and 15·1 respectively, for the two years studied. It may be noted also that as the size of family increased the percentage of the loans in good standing decreased.

TABLE 38.—RELATION OF NUMBER IN BORROWER'S FAMILY TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1935

Number in family	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1935 in per cent of original loan	Per cent of loans foreclosed
0	640	253·7	20·83	9·5	110·6	14·5
1, 2	552	290·6	24·03	6·5	116·7	12·9
3, 4	415	321·2	25·22	8·0	121·5	12·5
5, 6	171	326·8	27·50	2·9	118·1	11·1
7 and over	119	361·7	25·69	2·5	121·9	15·1
Total or average	1,897	292·8	23·88	7·3	116·9	13·3

It would seem that from the standpoint of meeting mortgage loan payments a moderately large family, providing as it does a source of cheap labour, is a definite asset. In any single year, however, when conditions were adverse, the cost of supporting a large family apparently left a smaller balance for servicing debts in the case of large families with the result that a larger proportion of the borrowers in these groups failed to meet their instalments when due.

Nationality of Settlers.—The relation of the nationality of settlers to status of loan is presented in tables 39 and 40. In both 1929 and 1935 the smallest proportion of loans foreclosed was among settlers of Scandinavian extraction, while the group having the largest proportion of its loans foreclosed was that described as "other" which was made up largely of Southern and Eastern Europeans. The apparent difficulty of this latter group to achieve the same degree of success as settlers from Northern European countries may be explained in part at least by the fact that a greater difference exists between the type and methods of farming in their native countries and Saskatchewan than is the case with those from Northern Europe. The group described as Anglo-Saxon, which includes mixed settlements of British, American, and Canadian origin,

TABLE 39.—RELATION OF NATIONALITY OF SETTLERS TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1929

Nationality of settlers	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1929 in per cent of original loan	Per cent of loans foreclosed
Scandinavian	137	227·7	18·74	27·7	95·8	.....
Anglo-Saxon	1,996	296·2	24·19	23·6	95·2	3·3
German	74	299·6	25·20	20·3	96·5	4·1
French	109	260·6	21·75	33·0	94·7	4·6
Other	92	252·2	22·39	14·1	95·6	7·6
Total or average	2,408	289·0	23·81	23·8	95·3	3·4

TABLE 40.—RELATION OF NATIONALITY OF SETTLERS TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1935

Nationality of settlers	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1935 in per cent of original loan	Per cent of loans foreclosed
Scandinavian	137	218·7	18·25	7·3	115·6	8·0
Anglo-Saxon	2,000	293·4	24·14	7·4	113·7	15·9
German	75	297·7	24·79	8·0	121·4	13·3
French	109	261·0	21·99	11·9	116·9	10·1
Other	92	245·6	21·67	5·4	113·8	22·8
Total or average	2,413	285·7	23·72	7·5	114·1	15·3

although showing a smaller than average percentage of loans foreclosed in 1929, was the second highest from the standpoint of foreclosures in 1935. Analysis of the nationality of the individual borrower yielded similar results to those discussed above, settlers of Scandinavian, French and German extraction showing a smaller percentage of loans foreclosed.

Transfer of Loans.—On the basis of those loans for which the information was available, 86 per cent of the farms on which mortgages were held were operated by the original borrowers on November 30, 1935. The percentage of foreclosures was much higher among the loans which had been transferred than among loans where the original borrower continued to operate the farm (tables 41 and 42). In the case of the latter group, 10 per cent were foreclosed in 1935 while 17·5 per cent of the loans transferred once and 16·4 per cent of those transferred more than once were foreclosed. At November 30, 1929, only 2·7 per cent of the loans still held by the original borrower were foreclosed while 8·1 per cent of those which had been transferred once and 12·5 of those which had been transferred more than once were foreclosed. A higher percentage of the loans which had not been transferred were also in good standing in both years.

TABLE 41.—RELATION OF TIMES LOANS WERE TRANSFERRED TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1929

Number of times transferred	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1929 in per cent of original loan	Per cent of loans foreclosed
0	2,846	305·5	23·82	26·4	97·1	2·7
1	570	271·0	22·84	21·6	94·1	8·1
2 and more	48	285·1	20·44	27·1	96·0	12·5
Total or average	3,464	299·8	23·64	25·6	96·7	3·8

The hazard accompanying the transfer of loans may be two-fold in character. The new borrower who has taken over the loan may be handicapped temporarily by a lack of familiarity with the farm and district and may be a less desirable risk than the original borrower. Secondly, while information was not available with regard to the reasons for transferring the loans, a comparison of appraised value per acre leads one to believe that the transferred farms may be poorer than those not transferred.

TABLE 42.—RELATION OF TIMES LOANS WERE TRANSFERRED TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1935

Number of times transferred	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1935 in per cent of original loan	Per cent of loans foreclosed
0	4,323	325·5	23·49	7·5	119·1	10·0
1	641	271·7	22·83	6·4	111·1	17·5
2 and more	55	301·1	20·84	9·1	107·6	16·4
Total or average	5,019	318·9	23·39	7·4	118·2	11·0

Qualifications of Inspectors.—The foregoing analysis has pointed out some of the factors which should be taken into consideration in the appraisal of farms for loan purposes. One of the primary requisites for the sound operation of any loaning organization is a staff of competent inspectors or appraisers who are capable of recognizing and appraising the importance of these various factors affecting the value of farm real estate as a security for loans. The outstanding qualification essential for satisfactory appraisal is farming experience (table 43).

TABLE 43.—RELATION OF INSPECTORS' EXPERIENCE TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1935

Experience of inspectors	Number of inspectors	Loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1935 in per cent of original loan	Per cent of loans foreclosed
Experience in Appraising—							
Experience in farming	5	464	355·0	23·61	5·0	118·7	7·8
No experience in farming	7	3,142	297·0	22·85	7·0	117·5	23·3
Total	12	3,606	305·7	22·98	6·7	117·7	21·3
No Experience in Appraising—							
Experience in farming	6	746	348·5	23·45	6·0	125·1	6·2
No experience in farming	5	1,065	334·9	24·24	5·5	115·6	19·2
Total	11	1,811	341·0	23·87	5·7	119·7	13·8
Grand Total	23	5,417	318·2	23·32	6·4	118·5	18·8

Fewer foreclosures occurred among loans recommended by inspectors having prior experience in farming regardless of whether they had had previous appraisal experience than among those recommended by inspectors who had never farmed. A higher proportion of foreclosures occurred among loans recommended by inspectors who had previous experience in appraising than among those inspected by men with no such previous experience. This situation is probably due to the fact that inspectors who had made appraisals throughout the period of inflated land values found it difficult to adjust themselves to the lower levels prevailing in more recent years.

Appraisal Policy.—An indication of the extent to which some of the factors which have been shown to be associated with success of loans have been considered in arriving at the value of the farms for loan purposes may be determined by reference to the foregoing tables. The fact that the average appraised value per acre decreased from $30 for excellent soils to $21 for poor soils shows that inspectors were not unmindful of soil differences in their appraisal work (table 3). However, since the percentage of the loans foreclosed was three times as great on the poor soils as on those classed as excellent, it is evident that poorer soils were not discounted sufficiently in arriving at the appraised value.

A somewhat similar situation is to be found in the case of topography. The appraised value per acre averaged $25 for level topography and $17 for hilly (table 5). The proportion of the loans foreclosed, however, was much greater on the hilly topography.

The difference in the average value per acre of farms in the different land classes indicates that the inspectors differentiated between marginal land and that of high quality (table 2). It would seem also that they had given some weight to the size of farm in arriving at the relative values (table 9). Likewise the joint relationship between the value of the farm buildings and the quality of the farm is reflected in the appraised value per acre. In all cases, however, the inverse relationship between the various groups having a higher appraised value per acre and the percentage of the loans foreclosed indicates that the differential between farms of high and low quality has not been sufficiently great.

The failure of inspectors to give sufficient consideration to the average regional yields of wheat and the variation in wheat yields from year to year is shown in tables 13 and 16. There is even some tendency for the values of farms in areas of higher yield and lower variability of yield to be discounted in spite of the fact that the percentage of the loans foreclosed increases as the yield decreases and the variability of yield increases.

Information provided on both the application for loan form and the inspector's report indicated that loans were based on the sale value of the property offered as security. The applicant was required to fill in "the present market value or price which I could now obtain for the property . . . ." This had to be distributed between land and buildings. The inspector's report called for separate estimates of the value of the cultivated land, the uncultivated land, and the land which was unfit for cultivation together with the amount which the buildings added to the value of the land. The sum of these figures was referred to as the selling value of the property. In addition the inspectors were asked, "What would the property now sell for with one-fifth cash?" Additional information was also requested concerning the last sale and price of the property as well as recent sales in the vicinity. These estimates together with information regarding the acreage and character of the land, the number of live stock, the purpose of the loan, the type of settlement, the location, the soil, and the character and family of the applicant completed the data which were available to aid in arriving at a decision as to whether or not individual loans should be made. Much of the general information was often either omitted or given in such terms as to be of little use in assisting in an intelligent appraisal of an application.

Replies received to a questionnaire sent to a number of farm loan organizations operating in Western Canada requesting information relating to their appraisal policies, indicate that up to 1935 they were almost unanimous in basing their appraisals on sale value. In addition to an estimate of the value of the land and buildings, information supplied on appraisers' reports was limited for the most part to a consideration of the soil, the locality, and some general information regarding the applicant. A number of the forms also provided for

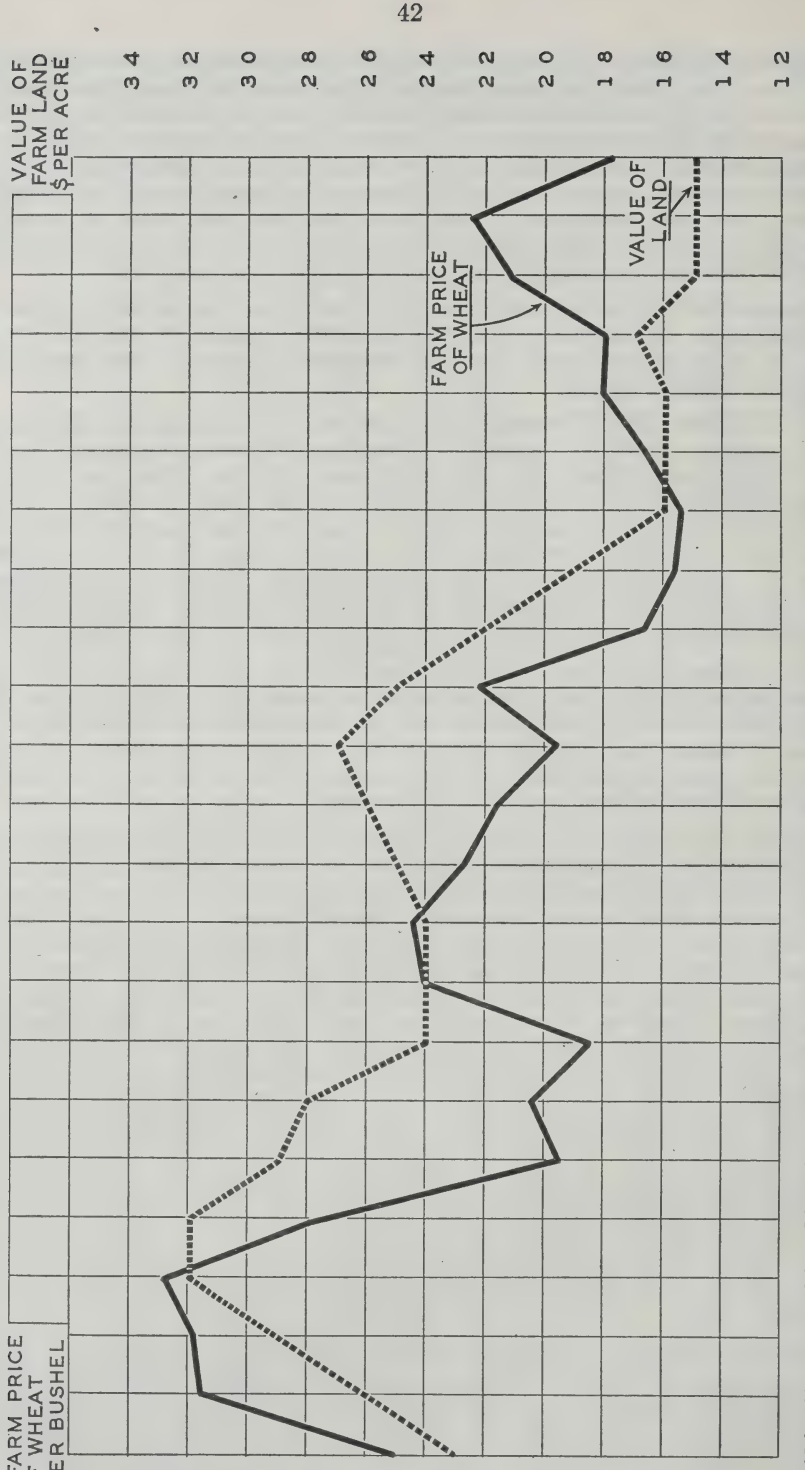


Fig. 10.—Comparison of the Farm Price of Wheat and the Value of Farm Land, 1916-1938.

a list of the applicant's assets and liabilities. Practically all, however, failed to supply any information with regard to the probable income or yields likely to be obtained on the farm over a long period, or to provide sufficient information to enable a supervisor in a central office to visualize the security offered and thus pass judgment intelligently on its desirability. This situation was recognized by a number of loan company officials who replied to the questionnaire, and who mentioned the need for revising the schedules formerly used to give more attention to the productive capacity of the farm.

In answering a question with respect to the qualifications and training required by inspectors or appraisers the majority referred to the desirability of training appraisers within their own organizations who are thoroughly familiar with farming, have sound judgment and good character, a preference being given to agricultural college graduates.

As shown in the foregoing discussion the most commonly used guide in farm appraisal has been sale value. Since sale value reflects the opinion of those individuals who make up the market, it is considered by many writers to be the best measure of value. In a perfect market, in the case of consumable goods, the market price is undoubtedly the best obtainable measure of value. A comparison of farm sale values and the prices of farm products indicates that sale values are for the most part based on current earnings, little consideration being given to probable price trends (figure 10). As a consequence, appraisals for loan purposes based upon sale values cause over-inflation of land values during periods of rising prices due to excessive liberality in lending. During a period of falling prices, on the other hand, land values are deflated and it is impossible for the farmer to obtain sufficient credit to meet his needs.

The effect of the use of current sale values as the basis of appraisal may be illustrated in connection with an actual loan made on a half-section farm in Rural Municipality Number 73. This farm was appraised by the inspector in 1918 at $10,000 and a loan of $4,000 was requested and granted. Since the average sale value of farm land in Saskatchewan which was estimated at $29 per acre in 1919, declined to $16 per acre in 1932, the appraised value in 1932 based on sale value would have been $5,500 as compared with $10,000 in 1918. While the loan of $4,000 granted in 1918 was only 40 per cent of the appraised value, a loan equal to 40 per cent of the appraised value in 1932 would have amounted to only $2,200. A maximum loan of 50 per cent of the appraised value would have amounted to $5,000 in 1918 and $2,250 in 1932. That is, in 1918 the farmer would probably receive more than was actually necessary to finance his farm operations, while in 1932 he would have been financially handicapped by lack of funds. The use of probable normal income on the other hand would have resulted in an appraised value between the two extremes and a loan which would have met the requirements of the farmer adequately and have been within the capacity of the farm to repay. Based on the average calculated gross income for the period 1919-1935, and an average period of about 4 years for receipts on a Saskatchewan wheat farm to equal the capital in real estate, the value of the farm would have been about $7,000. While these estimates have been roughly calculated, they at least indicate the application of the principle of appraising farms according to the anticipated long-time income.

A perfect market, moreover, implies that the commodity sold is uniform or that there is a complete and accurate knowledge of all differences in it. From this standpoint, the land market cannot be considered a perfect market. Land not only lacks uniformity but the elements of variation are not generally known. In this connection, a study of apple farms in the Newfane-Olcott area of western New York during the 13-year period 1913-1925 indicates that a

farmer might better have paid $292 per acre for an average farm on Dunkirk sandy loam soil rather than have accepted a farm on Clyde fine sandy loam soil as a gift.[1] During this period, farms on Dunkirk sandy loam soil sold at prices approximating $292 per acre while those on Clyde fine sandy loam were valued at $182 per acre. That is, individuals making up the farm real estate market not only failed to consider the long-time price trend but also failed to give sufficient consideration to the relative earning capacity of farms on the different soil types.

The changing pattern of the estimated value of land between 1921 and 1936 is effectively shown in a comparison of the average value of Saskatchewan farms per acre by municipalities (figures 11-13). While in 1921 the value of farm land per acre averaged less than $10 in only 10 municipalities, by 1936, 71 municipalities fell into this group. Similarly in 1921 the farms in 34 municipalities had an average value per acre of $30 or over but by 1936 the value of farm land averaged as much as $30 per acre in only 6 municipalities. While in 1921 the farms in most of the municipalities averaged from $20 to $30 per

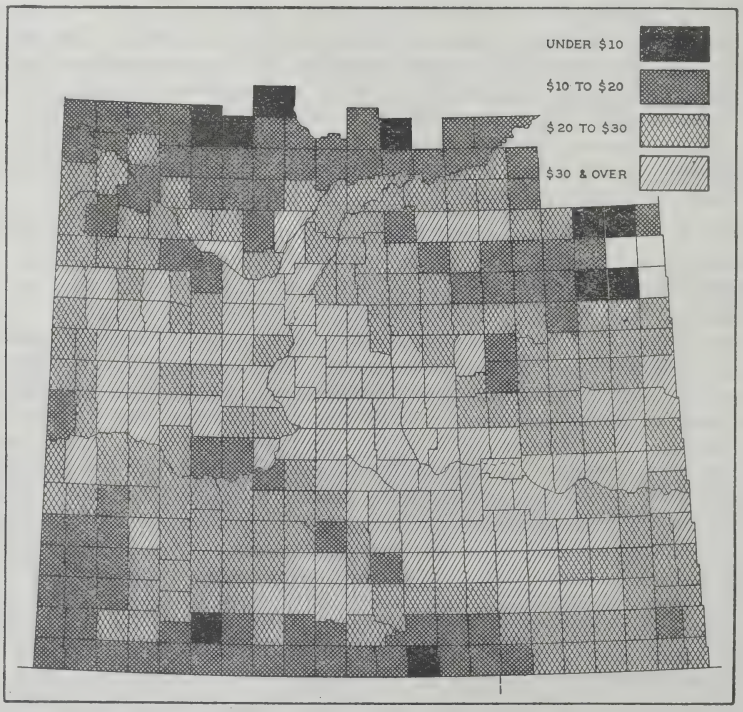


FIG. 11.—Map of Southern Saskatchewan showing the Average Value of Farms per Acre by Municipalities, 1921.

acre, in 1936, the majority of the municipalities had an average farm value of from $10 to $20 per acre. As shown in figure 14, the distribution of municipalities according to the average appraised value per acre of farms on which loans were made is similar to that in figures 11 and 12.

[1] Scoville, G. P. *et al*, The Apple Situation in New York, Cornell Ext. Bulletin 172, 1928.

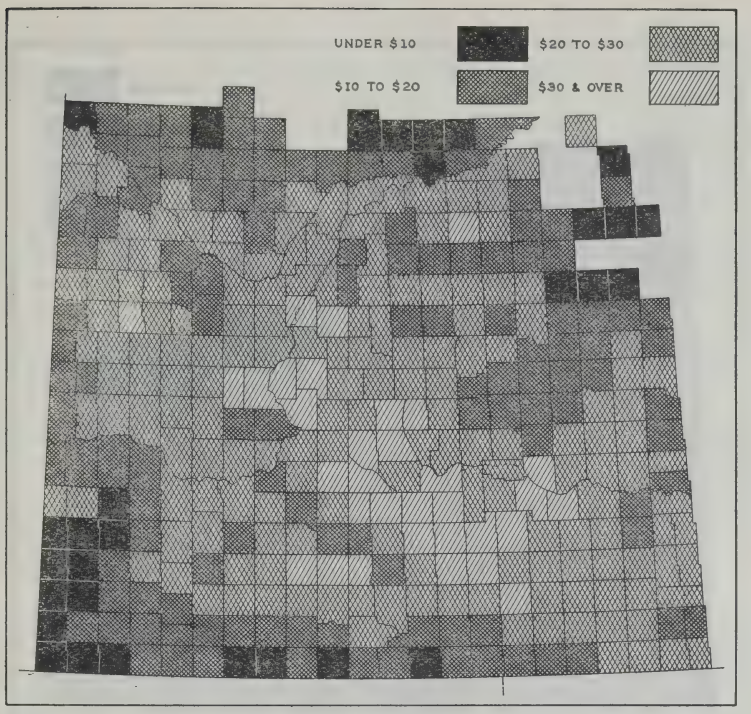


FIG. 12.—Map of Southern Saskatchewan showing the Average Value of Farms per Acre by Municipalities, 1926.

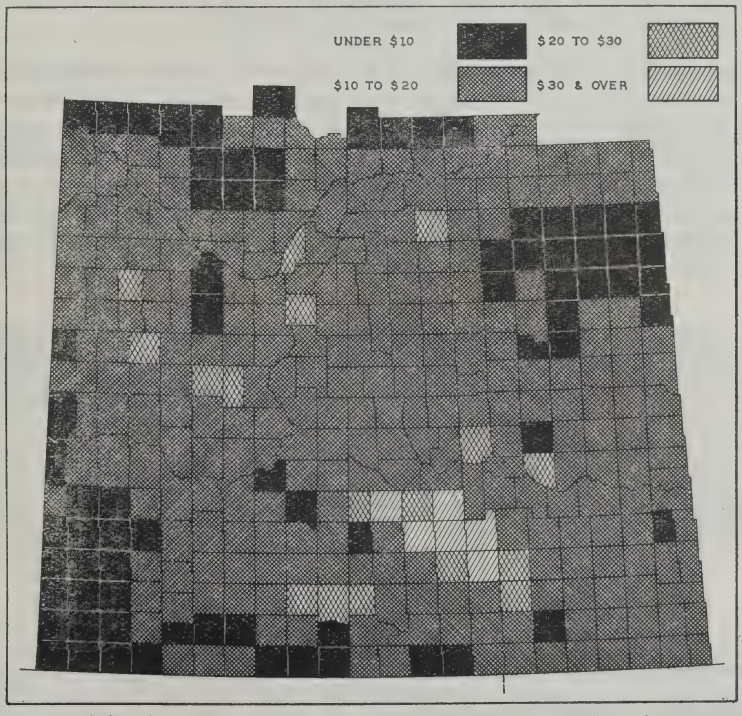


FIG. 13.—Map of Southern Saskatchewan showing the Average Value of Farms per Acre by Municipalities, 1936.

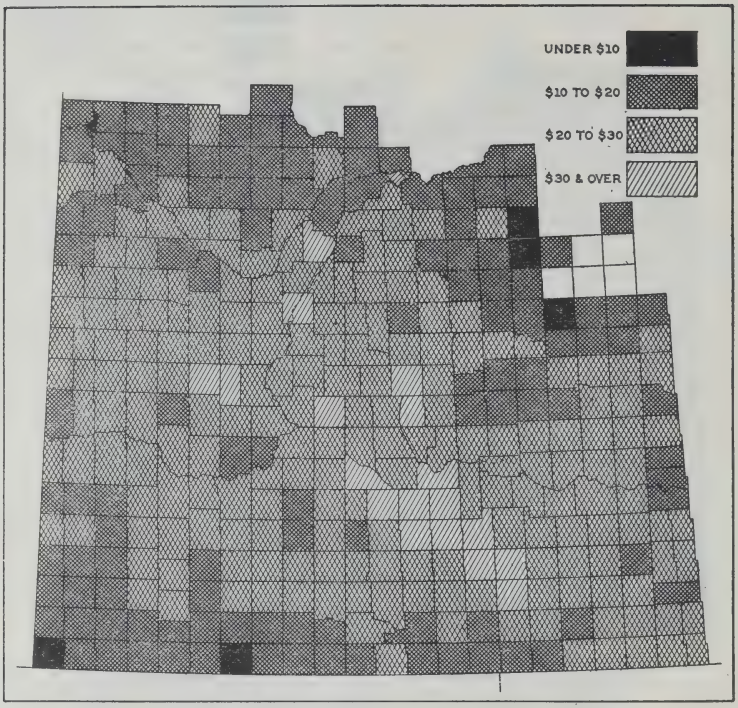


FIG. 14.—Map of Southern Saskatchewan showing the Average Appraised Value per Acre of Farms on which Loans were made, 1917-1935.

The instability of the sale value of farms is still further illustrated in table 44 in which changes in the value of high and low valued farms between 1921 and 1936 are compared. Among the municipalities having an average value per acre of less than $10, the average value of farms per acre decreased 25 per cent between 1921 and 1936. A progressively greater percentage decrease occurred in the higher value groups. In the group for which the average value per acre was $50 and over in 1921 the decrease in the value per acre amounted to 61 per cent.

TABLE 44.—COMPARISON OF CHANGES IN THE MUNICIPAL AVERAGE VALUE OF LOW AND HIGH-VALUED FARM LAND IN SASKATCHEWAN BETWEEN 1921 AND 1936[1]

Dollars per acre, 1921	Number of municipalities	Municipal average value of farm land, (dollars per acre.)			
		Census 1921	Census 1936	Decrease 1921–36	Per cent decrease 1921–36
Under 10	12	8	6	2	25
10–19	92	15	9	6	40
20–29	144	25	14	11	44
30–39	61	34	16	18	53
40–49	27	44	18	26	59
50 and over	10	70	27	43	61
Total or average	346	26	14	12	46

[1] Census Division, Dominion Bureau of Statistics.

In purchasing a farm the buyer usually has a three-fold objective—that of securing a home, a job for himself and family, and an investment for his capital. The amount which he will pay for a farm, therefore, reflects what he considers to be the value of the farm based on the value of the perquisites and the anticipated returns to himself and his family for their labour and capital. Since the value of family living as well as basic farm wages for family labour tend to be relatively fixed for all sizes of farms, their inclusion in the determination of the price to be paid for a farm, causes the sale value of poor farms to be relatively greater than that of good farms.[1] Willing buyers may be found for small farms of low productivity which will provide shelter and a subsistence for the farmer and his family but yield no surplus income from which to repay a loan. It is loans on such farms which constitute the greatest problem to loaning agencies which depend exclusively on sale value as the basis of their appraisal policy.

Loaning Policy.—Even though appraisals are carefully made and represent the true value of the properties offered as security a sound loaning policy is essential to the success of a loan organization. Such a policy must embrace the purpose for which the loan is required, the amount which should be loaned, both per farm and per acre, the margin of security required, and the provision for repayment.

Purpose of Loan.—At the time the data were secured for the study each loan was classified according to the purpose for which it was obtained as given on the application form. The classes used at that time were consolidation of indebtedness, purchase of stock, seed, equipment, land and combinations of these. For purposes of analysis these classes have been grouped under debt service and operating capital as shown in tables 45 and 46. Of the loans reporting

TABLE 45.—RELATION OF PURPOSE OF LOAN TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1929

Purpose of Loan	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1929 in per cent of original loan	Per cent of loans foreclosed
Debt service	1,877	306·8	24·27	24·3	96·2	1·9
Operating capital	210	222·9	18·33	31·9	90·8	3·3
Total or average	2,087	298·5	23·82	25·1	95·9	2·1

purpose of loan, 90 per cent were for the purpose of consolidating debts. In both years a higher proportion of the loans classified as having been made for the purpose of purchasing supplies, equipment, and live stock, were foreclosed than of those made for the purpose of consolidating debts. However, among those loans which were current a higher proportion of those classified under operating capital were in good standing than of those made for the purpose of consolidation of indebtedness. The amount owed on current loans in per cent of the original loans was also smaller in the former group at the dates studied.

[1] The fact that appraisers and assessors tend to over-value poor land and to undervalue good land relative to their earning capacity has been shown by numerous investigations including the following: Aull, G. H., and Ernest Riley, Some Inequalities in the Assessment of Farm Real Estate in South Carolina, S.C. Agr. Exp. Sta. Bul. 313, 1938. Hammar, C. H., The Accuracy and Flexibility of Rural Real Estate Assessment in Missouri, Mo., Agr. Exp. Sta. Res. Bul. 169, 1932. Hudson, S. C., Taxation in Rural Ontario, Dominion of Canada, Dept. of Agr. Pub. 489, Tech. Bul. 4, 1936.

TABLE 46.—RELATION OF PURPOSE OF LOAN TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1935

Purpose of loan	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1935 in per cent of original loan	Per cent of loans foreclosed
Debt service	1,795	305·5	24·23	7·0	117·1	9·9
Operating capital	295	222·4	18·31	11·2	103·3	35·9
Total or average	2,090	296·8	23·76	7·6	116·3	13·6

Size of Loan.—A question which frequently arises in the administration of loan organizations is the relative merits of large and small loans. Certain governmental loan organizations place an absolute maximum limit on the size of loan which may be made to individuals. The Canadian Farm Loan Act fixes the maximum amount loanable to an individual at $6,000.[1] The maxi-

TABLE 47.—RELATION OF SIZE OF LOAN TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1929

Size of loan in dollars	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1929 in per cent of original loan	Per cent of loans foreclosed
Less than 1,000	643	165·1	11·56	27·7	98·4	14·8
1,000–1,999	1,394	195·5	18·61	22·0	99·1	11·4
2,000–2,999	685	291·0	20·84	22·3	99·1	7·4
3,000–3,999	574	345·0	24·30	18·8	99·1	6·3
4,000–4,999	307	382·9	27·54	19·9	97·8	7·2
5,000 and over	525	605·4	31·13	22·3	96·6	3·4
Total or average	4,128	298·3	23·64	22·4	98·0	9·2

TABLE 48.—RELATION OF SIZE OF LOAN TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1935

Size of loan in dollars	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1935 in per cent of original loan	Per cent of loans foreclosed
Less than 1,000	750	166·4	12·41	14·9	105·6	23·6
1,000–1,999	1,458	211·7	18·71	8·0	112·6	24·8
2,000–2,999	1,350	278·0	20·96	5·9	117·6	13·1
3,000–3,999	870	369·1	24·03	3·6	119·5	18·3
4,000–4,999	499	422·3	26·47	3·8	120·3	19·2
5,000 and over	756	587·0	29·46	2·1	119·9	15·6
Total or average	5,683	317·9	23·26	6·6	118·1	19·1

mum limit provided in the United States Agricultural Credit Act for loans made by the Federal Land Banks is $50,000, with a preference given to loans for $10,000 or less.[2] The original Farm Loan Act in the United States set an upper limit of $10,000 which was raised to $25,000 in 1923 and finally to $50,000 in 1933. No such limitation was provided in the Saskatchewan Farm Loan Act, the amount of the loan being limited only to fifty per cent of the Board's valuation of the property offered as security.[3] Similarly the amount

[1] Revised Statutes of Canada, 1927, Chapter 66, as amended by 24-25 George V, Chapter 46 (1934) and by the Canadian Farm Loan Act Amendment Act, 1935.

[2] Farm Credit Administration, American Institute of Banking, New York, p. 209.

[3] Statutes of Saskatchewan, 1930, Chapter 159, Section 13.

loaned by commercial loaning organizations is determined by the security offered. Almost one-half of the loans studied however, were for less than $2,000 (figure 15). The relation of size of loan to foreclosure on Saskatchewan farms is presented in tables 47 and 48. In 1929 the percentage of the loans foreclosed varied from 14·8 per cent for the group of less than $1,000 to 3·4 per cent for the group of $5,000 and over. In 1935 the range of foreclosures was from 23·6 per cent to 15·6 per cent for the same groups as above. There was no significant difference in the percentage of the loans in good standing in the different groups in 1929 but in 1935, as might be expected following a period of depressed conditions in agriculture, a higher proportion of the smaller loans were in good standing.

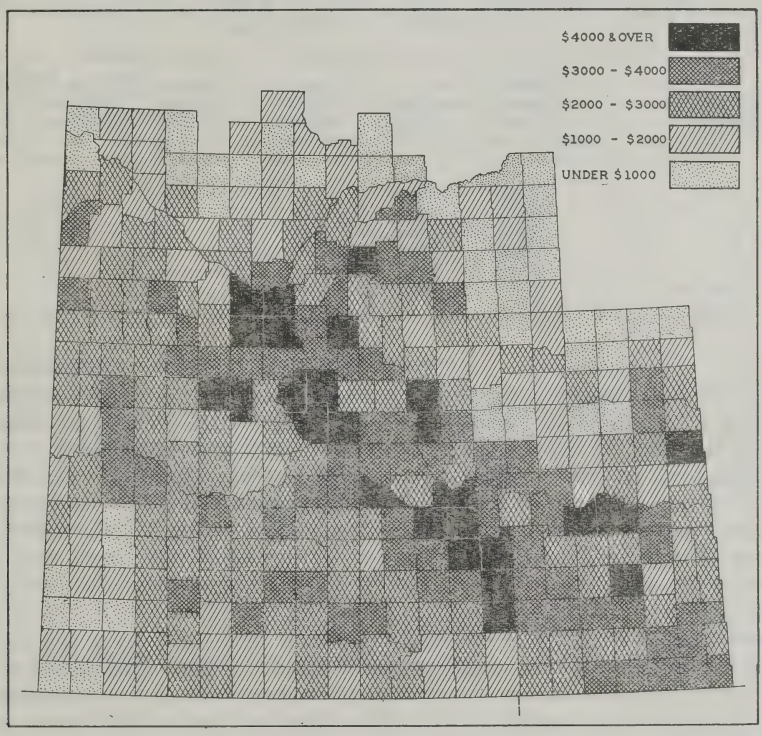


FIG. 15.—Map of Southern Saskatchewan showing Average Size of Loans by Municipalities.

Loan per Acre.—The relation of loan per acre to other factors in 1929 is shown in table 49. While over 12 per cent of the loans of less than $5 per acre were foreclosed in 1929 only 3 per cent of those amounting to $15 or more

TABLE 49.—RELATION OF LOAN PER ACRE TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1929

Loan per acre (dollars)	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1929 in per cent of original loan	Per cent of loans foreclosed
Under 5	542	223·2	10·82	26·6	98·7	12·2
5–10	2,409	278·7	20·11	23·4	98·6	9·9
10–15	1,048	347·5	29·01	19·1	97·4	6·5
15 and over	237	419·0	40·57	20·3	97·0	3·0
Total or average	4,235	297·9	23·64	22·6	97·9	9·0

per acre had been foreclosed. It is apparent that there is an inter-relationship between the loan per acre and the size of farm and appraised value per acre since both of these factors increase as the loan per acre increases. In other words it would appear that the loan makes up about the same proportion of the appraised value on all farms. The fact that fewer foreclosures occur among those farms on which a higher loan per acre was made, therefore, is because those loans were made on the better farms. The higher carrying charges on the larger loans during the years of low farm income preceding 1935, however, resulted in an almost equal proportion of the loans in all groups being foreclosed (table 50).

TABLE 50.—RELATION OF LOAN PER ACRE TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1935

Loan per acre (dollars)	Number of loans reporting information	Acres mortgaged per farm	Appraised value (dollars per acre)	Per cent of loans in good standing	Debt in 1935 in per cent of original loan	Per cent of loans foreclosed
Under 5	671	267·5	12·73	13·7	108·3	20·7
5–10	3,370	310·4	20·79	6·7	117·7	17·9
10–15	1,345	346·5	29·44	3·3	119·9	21·0
15 and over	299	386·8	40·68	3·3	118·3	21·7
Total or average	5,685	317·7	23·42	6·6	118·1	19·2

Margin of Security.—In the case of governmental loan organizations it is usually provided that no loan shall be made for an amount greater than fifty per cent of the appraised valuation of the property offered as security. The reasons why lenders require that the property offered as security for a loan shall have a higher value than the loan are three-fold. The most important is that it provides a guarantee to the lender that if he has to foreclose the loan he can realize the amount of his original investment plus accrued interest and charges from the sale of the property. It has also been found very difficult for a borrower to repay a loan equal to the full amount of the value of the property and maintain his family. From the standpoint of moral risk it is considered that a borrower will make a greater effort to repay his loan if he has a substantial investment in the property himself. Out of 5,636 loans studied in 1935, about 60 per cent were from 30 to 50 per cent of the appraised value of the farms given as security (table 52). Six per cent or 366 loans exceeded the usual limit of 50 per cent of the appraised value.

TABLE 51.—RELATION OF LOAN IN PER CENT OF THE APPRAISED VALUE TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1929

Loan in per cent of appraised value	Number of loans reporting information	Acres mortgaged per farm	Appraised value		Dollars loaned per farm	Per cent of loans in good standing	Debt in 1929 in per cent of original loan	Per cent of loans foreclosed
			Dollars per acre	Dollars per farm				
Under 20	53	304·8	28·82	8,783	1,682	22·6	98·7	1·9
20–29	368	293·6	26·77	7,860	2,020	35·9	96·4	4·9
30–39	1,643	297·6	24·57	7,311	2,557	24·3	97·1	6·9
40–49	1,820	303·6	22·75	6,908	2,974	19·4	98·4	10·9
50–59	270	270·4	19·32	5,224	2,661	17·0	99·9	11·5
60 and over	40	267·6	14·75	3,947	2,682	17·5	103·9	12·5
Total or average	4,194	297·9	23·64	7,043	2,685	22·6	97·9	8·8

Foreclosure of loans increased rapidly as the loan increased in size relative to the appraised value. The percentage of the loans foreclosed as at November 30, 1929, ranged from 1 per cent for the group of loans amounting to less than 20 per cent of the appraised value to 12·5 per cent for those which were over 60 per cent of their appraised value.

At the same date in 1935, 2·9 per cent of the loans which made up less than 20 per cent of the appraised value of the farms given as security were foreclosed, while over 30 per cent of the loans on which the margin of security was less than 50 per cent were foreclosed (table 52).

TABLE 52.—RELATION OF LOAN IN PER CENT OF THE APPRAISED VALUE TO MORTGAGE FORECLOSURES AND OTHER FACTORS, 1935

Loan in per cent of appraised value	Number of loans reporting information	Acres mortgaged per farm	Appraised value		Dollars loaned per farm	Per cent of loans in good standing	Debt in 1935 in per cent of original loan	Per cent of loans foreclosed
			Dollars per acre	Dollars per farm				
Under 20	103	350·0	26·92	9,422	1,625	10·7	113·5	2·9
20–29	656	342·9	25·52	8,751	2,242	9·5	115·4	7·6
30–39	2,362	318·2	23·97	7,626	2,658	7·5	118·5	15·0
40–49	2,179	310·6	22·36	6,944	2,973	4·7	118·8	25·3
50–59	285	275·6	18·24	5,026	2,560	4·9	116·6	32·6
60 and over	51	313·4	13·96	4,324	2,940	9·8	119·0	31·4
Total or average	5,636	317·7	23·42	7,438	2,690	6·6	118·1	18·9

Theoretically, if the appraised values of the farms upon which loans were made were obtained by the capitalization of the net income remaining after all expenses, including labour, were met, the same margin of security would be satisfactory for all loans. However, because the appraisals were based on sale values which, as mentioned in the foregoing discussion, appear to take into consideration returns to family labour as well as capital, it is necessary to adjust the margin of security to the quality and size of the farm. If, for example, it is decided that no loan should be made for an amount greater than 50 per cent of the appraised value, it might be necessary to set the maximum amount loanable on the poorest grade of land at 20 per cent of the appraised value, somewhat higher percentages being allowed on the superior grades of land.

Because the amount required to support the family is relatively fixed regardless of the class of land, a smaller part of the total income remains to service debts on farms having a low income but this fact is neglected by almost all loan agencies.[1] As shown in tables 3 and 9 the loans studied made up about the same proportion of the appraised value regardless of grade of soil, topography, land class or size of farm. This is undoubtedly an important factor in the high proportion of the loans which were foreclosed on the poorer grades of land and on the smaller farms.

As shown in tables 51 and 52 the farms on which the greatest proportion of the appraised value was loaned on the average were larger and of higher value per acre than those on which the maximum loan was made. While both the average appraised value and average loan decreased progressively between the group for which the loan made up less than 20 per cent of the appraised value and that for which the loan amounted to one-half of the value, a very great increase in the proportion of the loans foreclosed occurred.

[1] Studies carried on by the United States Farm Credit Administration in various parts of the country indicate that there is no significant difference in the proportion of the appraised value loaned on good or poor land.

Provision for Repayment.—By the introduction of an amortization system of loan repayment over a thirty-year period together with the acceptance of excess payments on principal at any time the Saskatchewan Farm Loan Board was the first farm credit organization in Western Canada to recognize the need for reform in the method of repayment of loans. While the amortization system providing for fixed annual payments has proved to be very satisfactory in regions where farm income is relatively stable, experience has shown that it is not well adapted to agricultural conditions in Saskatchewan because of the extreme variability of farm income. While failure to give adequate consideration to certain factors affecting the value of a farm for loan purposes has been an important element in the losses incurred by loaning agencies, these losses might have been materially reduced by the use of a flexible loan repayment system adapted to fit the needs of the borrowers.

A Flexible System of Repayment of Loans

Variability of Income.—Undoubtedly the greatest single problem facing prairie agriculture is the variability of farm income.[1] This variability arises from two sources, variation in prices and variation in production. While, generally speaking, price variation is usually the more important factor, in Saskatchewan, where wheat is the basis of the farm economy, variability of yield resulting from pronounced variations in rainfall and other climatic conditions is more significant. While a greater measure of stability of prices may be obtained and the variability of wheat yield may be reduced through changes in the utilization of marginal land, farm income in Saskatchewan will never lose entirely its variable nature. It is necessary, therefore, to consider means whereby the effects of this variation in income on the individual farmer may be lessened.

The most serious consequences of a variable gross income arise from the existence of a high proportion of fixed costs. Surveys in respresentative areas in Saskatchewan indicate that almost 60 per cent of the farm expenses excluding debt charges, may be considered as being relatively constant.[2] If interest and capital instalments be added, it is apparent that the problem of meeting year to year expenditures on a Saskatchewan farm is very serious.

Adapting Long-Term Contracts.—The importance of adapting long-term contracts to the requirements of the prairie farmer has been recognized in some instances, notably through the crop-share form of lease and the increasing number of farms sold on a crop-share basis. The majority of farm contracts, however, still call for fixed payments, leaving the farmer who is a victum of an uncontrollable variability of income in a precarious and insecure position.

Although a number of writers have supported flexible forms of repayment of long-term loans, little has been accomplished by way of practical application of the principle.[3] The provision for the long-term repayment of loans on an instalment or amortization basis some twenty years ago represents one of the most important single contributions in farm finance, but it has not operated with equal success in all areas. In regions of high variability of income the payments required during good years were not sufficiently high to provide for the years of low income when no payment could be made. While the encouragement of borrowers to build up a reserve fund with the loan organization during years of high income would probably help the situation, the failure of the borrowers to make substantial over-payments suggests the need for a more

[1] For a discussion of the variability of farm income in the Prairie Provinces and its implications, see "Economic Problems of the Prairie Provinces" by W. A. Mackintosh.

[2] Allen, William, "The Farm Business in Saskatchewan", University of Saskatchewan College of Agriculture, Bulletins Nos. 37, 43 and 52.

[3] Murray, W. G., Iowa Agr. Exp. Station Bul. No. 315, 1934, Galbraith, J. K., R. M. Macy and W. Malenbaum, Journal of Farm Economics, August 1937, pp. 764-783, Hill, F. F., Journal of Farm Economics, February 1938, pp. 257-281.

TABLE 53.—ILLUSTRATION OF THE ADAPTATION OF DIFFERENT LOAN REPAYMENT PLANS TO ACTUAL LOANS ON SASKATCHEWAN FARMS BY YEARS FOR THE PERIOD 1918-1935

Rural Municipality No. 2—
Acreage suitable for cultivation per farm ... 205·6
Average wheat yield per acre ... 10·4
Coefficient of variability ... 75·0

Column No.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
							Contracted Payments					Actual Payments							½ Crop Share Payment					
															Balance due (cumulative)			Surplus or deficit over payment and farm expenses (4) — (12)				Balance due (cumulative)		Surplus or deficit over payment and farm expenses (4) — (19)
Year	No. of farms	Calculated gross income per farm	Estimated minimum farm expenses	Balance of income left to cover debt service (2) — (3)	Deficit balance (cumulative)	Loan per farm	Annual payment 7·658% of loan	Interest (6)% of amount owing)	Principal	Balance due on principal	Surplus or deficit over payment and farm expenses (4) — (7)	Annual payment	Interest	Principal	Interest arrears	Charges	Principal		Annual payment (½ of gross income)	Interest	Principal	Interest arrears	Principal	
1918	1	630	1,000	— 370	— 370	1,000	77	65	12	988	— 447				65		1,000	— 370				65	1,000	— 370
1919	4	1,484	1,000	484		2,800	215	162	53	2,764	369	7	7		193		2,800	477	297	199	98		2,702	187
1920	9	3,702	1,000	2,702		3,444	264	223	41	3,385	2,439	140	140		174		3,444	2,502	740	221	519		2,881	1,962
1921	9	712	1,000	— 288	— 288	3,444	264	226	44	3,343	— 552	107	107		305		3,444	295				187	2,851	— 288
1922	9	2,656	1,000	1,656		3,444	264	216	46	3,297	1,392	270	270		276		3,444	1,386	531	357	144		2,737	1,125
1923	9	1,594	1,000	594		3,444	264	214	50	3,247	730	208	208		340		3,444	636	398	178	221		2,516	578
1924	9	3,500	1,000	2,500		3,444	264	211	53	3,195	2,295	451	451		122		3,444	2,122	742	164	578		1,938	1,848
1925	9	3,607	1,000	2,607		3,444	264	206	58	3,140	2,513	234	244		109		3,444	2,363	791	128	663		1,334	2,046
1926	9	5,389	1,000	4,389		3,444	264	204	60	3,079	4,125	423	341	82			3,562	3,966	1,078	87	991		343	3,812
1927	9	4,113	1,000	3,113		3,444	264	200	64	3,015	2,849	243	219	24			3,338	3,070	365	22	343			2,748
1928	9	3,366	1,000	2,366		3,444	264	196	68	2,947	2,102	222	217	5			3,332	2,344					Paid off	
1929	9	3,378	1,000	2,378		3,444	264	192	72	2,874	2,114	238	217	21			3,311	2,140						
1930	9	744	1,000	— 256	— 256	3,444	264	187	77	2,797	— 530	96	96		120		3,311	— 352						
1931	9	69	1,000	— 931	—1,187	3,444	264	182	82	2,718	—1,195	37	37		306		3,311	— 988						
1932	9	411	1,000	— 589	—1,776	3,444	264	177	87	2,626	— 853	32	22		509		3,311	— 621						
1933	9	166	1,000	— 834	—2,610	3,444	264	171	93	2,533	—1,098	— 14			737	14	3,311	— 820						
1934	9		1,000	—1,000	—3,610	3,444	264	165	99	2,436	—1,264	— 7			1,022	30	3,311	— 955						
1935	9	113	1,000	— 887	—4,497	3,444	264	158	106	2,330	—1,151	— 247			1,305	287	3,311	— 640						

TABLE 54.—ILLUSTRATION OF THE ADAPTATION OF DIFFERENT LOAN REPAYMENT PLANS TO ACTUAL LOANS ON SASKATCHEWAN FARMS BY YEARS FOR THE PERIOD 1918-1935

Rural Municipality No. 7—
Acreage suitable for cultivation per farm ... 204·4
Average wheat yield per acre ... 10·8
Coefficient of variability ... 66·7

Column No.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
							Contracted Payments					Actual Payments							½ Crop Share Payment					
															Balance due (cumulative)			Surplus or deficit over payment and farm expenses (4) — (12)				Balance due (cumulative)		Surplus or deficit over payment and farm expenses (4) — (19)
Year	No. of farms	Calculated gross income per farm	Estimated minimum farm expenses	Balance of income left to cover debt service (2) — (3)	Deficit balance (cumulative)	Loan per farm	Annual payment 7·658% of loan	Interest (6)% of amount owing)	Principal	Balance due on principal	Surplus or deficit over payment and farm expenses (4) — (7)	Annual payment	Interest	Principal	Interest arrears	Charges	Principal		Annual payment (½ of gross income)	Interest	Principal	Interest arrears	Principal	
1918	5	1,421	1,000	421		1,240	95	81	14	1,226	336	64	64		17		1,240	397	286	81	205		1,035	145
1919	17	582	1,000	— 418	— 418	1,788	137	117	20	1,763	— 355	53	53		60		1,788	— 471				112	1,728	— 418
1920	22	644	1,000	— 356	— 678	1,760	134	113	21	1,699	— 460	51	51		119		1,760	— 587				203	1,703	— 356
1921	24	1,116	1,000	116	— 507	1,704	130	108	22	1,644	— 14	61	61		103		1,704	— 35				308	1,661	116
1922	24	1,833	1,000	833		1,704	130	107	23	1,621	703	86	86		201		1,704	747	367	367		68	1,661	666
1923	24	787	1,000	— 213	— 213	1,704	130	105	25	1,595	— 343	171	171		238		1,704	— 584				180	1,661	— 213
1924	24	1,931	1,000	931		1,704	130	104	26	1,568	801	222	222		328		1,704	702	386	299	87		1,574	545
1925	24	1,589	1,000	589		1,704	130	102	28	1,540	429	172	167	5			1,699	307	312	102	210		1,365	347
1926	24	3,283	1,000	2,283		1,704	130	100	30	1,509	2,135	178	110	68			1,631	2,105	657	89	568		797	1,926
1927	24	1,551	1,000	651		1,704	130	98	32	1,477	821	151	106	45			1,583	509	330	32	298		519	321
1928	24	1,397	1,000	397		1,704	130	96	34	1,443	559	133	103	30			1,556	294	280	34	246		273	117
1929	24	948	1,000	— 52	— 52	1,704	130	94	36	1,406	— 182	79	79		32		1,556	— 131				18	273	— 52
1930	24	527	1,000	— 473	— 525	1,704	130	91	39	1,366	— 663	36	27		80		1,556	— 509				57	273	— 473
1931	24		1,000	—1,000	—1,525	1,704	130	89	42	1,325	—1,130	6	6		190		1,556	—1,006				57	273	—1,000
1932	24	269	1,000	— 731	—2,256	1,704	130	86	44	1,280	— 861	15	17		282		1,556	— 748				58	273	— 731
1933	24	215	1,000	— 785	—3,041	1,704	130	83	47	1,233	— 915	22	22		384		1,556	— 808				101	273	— 785
1934	24		1,000	—1,000	—4,041	1,704	130	80	50	1,183	—1,110	27	27		483		1,556	—1,027				125	273	—1,000
1935	24	423	1,000	— 577	—4,618	1,704	130	77	53	1,129	— 707	10	10		564		1,556	— 587				151	273	— 577

positive action on the part of lending institutions by way of some provision for what would virtually amount to enforced savings in order to safeguard loans made in areas of variable income.

One-Crop Farming.—In any one-crop farming area where the major part of the income is derived from one source the logical basis of a flexible repayment system is a share of the crop. In Saskatchewan, over 85 per cent of the farm leases are on a share-rent basis. It is moreover, the practice of most long-term credit agencies in the Prairie Provinces to require a crop lease from delinquent borrowers. In an area where the principal cause of variability of income is to be found in prices, the use of an index based on the prices of the principal sources of income as the basis for automatically adjusting the instalment to be paid would involve fewer administrative difficulties. In Saskatchewan, however, the high variability of yield in addition to price makes such a basis impracticable.

Application to Saskatchewan.—For the purpose of demonstrating the adaptation of the flexible loan repayment principle to Saskatchewan conditions, a one-fifth crop share payment plan has been used. Since a common basis for share-renting farms in Saskatchewan is for a one-third share of the crop, the owner supplying all of the capital invested in real estate and paying the taxes, one-fifth of the crop might be considered a fair compensation to the mortgagee who has supplied somewhat less than half of the capital. For purposes of this study the gross farm income was calculated by taking municipal average yields and treating the farms within each municipality as a unit. The annual production of wheat was calculated by assuming that one-half of the land suitable for cultivation would be in wheat each year and multiplying this figure by the average municipal yield. The gross income was then calculated by using the average Winnipeg price for the crop year adjusted for freight differentials and grade.

A comparison of the standing of loans made in certain municipalities at the end of 1935 using, (1) the contracted payments, (2) actual payments and (3) the proposed one-fifth crop share payment, is presented in tables 53 to 56.

In order for a farm to operate certain items of expense must have prior right. These include taxes, labour, repairs, tractor fuel and family living. While the amount necessary to cover these items will vary according to size of farm a conservative estimate of a minimum amount to cover such items on an average Saskatchewan farm is $1,000.[1] In other words, on an average Saskatchewan farm the revenue must exceed $1,000 before anything is available for servicing debts. This balance is shown in colmun 4 of the tables. It is not sufficient, however, to consider only the annual balance. Many farmers who have had a successful year are financially crippled, not by current expenses, but by accumulated debts resulting from previous low-income years. That is, in order to avoid handicapping a farmer's current operations, short-term debts accruing from essential operating expenses of previous years should be paid before payment can safely be made on long-term obligations. For purposes of illustrating the application of the share-crop repayment principle payments have been assumed only on years when there was no cumulative deficit balance of expenses over estimated receipts (column 5). That is, following a period such as 1930-35 when the income was less than estimated expenses each year, it would be necessary to make some provisions for the repayment of accumulated short-term debts before making payments on a mortgage.

Standing of Loans under Contractual Payments.—The relative standing of loans made in Rural Municipality Number 2 under the contracted payments,

[1] "Probable Net Farm Revenues", University of Saskatchewan, College of Agriculture, Agricultural Extension, Bul. No. 64.

the payments actually made and the proposed one-fifth crop-share payment is presented in table 53. The average acreage suitable for cultivation on farms upon which loans were made amounted to 395·6 acres, the average wheat yield for the 18-year period was 10·4 bushels per acre and the coefficient of variability of yield was 75·0 per cent. The average loan being $3,444, the annual contracted payment amounted to $264, a progressively smaller part of which went for interest each year. If these payments had been made each year as they fell due, the balance outstanding on principal in 1935 would have been $2,330. However, the aggregate payments actually made amounted to only $2,340 as compared with $4,516 required under the contract. Principal payments were made on only four of the 17 years and amounted to $132. In 1935 the amount outstanding was, interest arrears $1,035, charges $267, and principal $3,311, making a total of $4,883.

Under the proposed one-fifth crop-share payment plan, no payment could be counted on for 1918 or 1921 when the estimated income was less than what was considered necessary to cover minimum expenses, yet the entire loan would have been paid off by the end of 1927. A comparison of columns 11, 18 and 24 shows the net amount of the estimated gross income remaining after the three types of instalments are deducted. The average balance remaining during the period 1918-1927 after the crop share payments were deducted amounted to $1,316 as compared with $1,597 and $1,564, respectively, for the actual and contracted payments. From this, it would seem that in the years of high returns a much greater payment than that required could have been made without financially handicapping the borrowers.

A similar net result to that just discussed is obtained when the flexible payment scheme is applied to the loans made in Rural Municipality Number 7 and the balance compared with that obtained when the contracted and actual payments are used (table 54). On loans in this Municipality the estimated revenue during the years 1919 and 1920 was less than the estimated minimum expenses, and since a deficit balance remained in 1921 (column 5) no payment was calculated for the years 1919-1921. The amount outstanding at the end of 1935 on an average loan of $1,704 would have been $1,129 had the contracted payments been met, but actually totalled $2,210, including $564 interest arrears and $1,556 principal. The estimated balance outstanding in 1935 under the crop-share payment plan would have been $424 made up of $151 interest arrears and $273 principal.

A comparison of the total payments made under each plan and the balance due at the end of 1935 is presented in table 55 for a number of municipalities. It may be noted that in each case the balance actually outstanding in December 1935, made up of charges, interest, and principal, amounted to about twice the amount which would have remained had the contracted payments been made. With the exception of Rural Municipality Number 493, for which the average loan was $1,124 and the amount outstanding at the end of 1935, $1,103, the amount due in December 1935 exceeded the original loan in all of the municipalities studied, although average payments of from $800 to $2,430 were made during the period.

The application of different loan repayment plans to an actual loan made in 1918 on a half-section farm in Rural Municipality Number 73 is shown in table 56. This farm, on which 310 acres is suitable for cultivation, was appraised at $10,000 in 1918 and a loan of $4,000 granted. The payment which the borrower agreed to make annually was $306, including interest at 6½ per cent of the outstanding principal and an increasing instalment on principal. Had the payments been made as they fell due the amount of the principal outstanding at the end of 1935 would have been $2,511. An indication of the relative ease of making these payments each year may be obtained from the third column of the table which represents the amount of the estimated gross income

TABLE 55.—COMPARISON OF LOAN REPAYMENT PLANS AS APPLIED TO AN AVERAGE FARM IN SELECTED MUNICIPALITIES IN SASKATCHEWAN FOR THE PERIOD 1918-1935

Column No.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
Rural Municipality	Number of farm years	Acres suitable for cultivation per farm	Average wheat yield per acre	Coefficient of variability	Average loan	Appraised value	Calculated gross income	Payments to Dec., 1935			Balance due in December, 1935							
								Contracted payments	Actual payments	Crop-share payments	Contracted payment	Actual payment				¼ Crop-share payment		
											Principal	Charges	Interest	Principal	Total	Interest	Principal	Total
					$	$	$	$	$	$	$	$	$	$	$	$	$	$
2	149	305·6	10·4	75·0	3,411	10,109	2,109	4,516	2,430	1,883	2,329	267	1,305	3,311	4,883		Paid off, 1927	
4	404	204·4	10·8	66·7	1,704	3,880	1,024	2,216	1,540	2,018	1,129		564	1,556	2,120	151	273	424
19	195	259·2	11·1	63·1	1,331	3,703	1,330	1,756	1,007	2,490	329		324	1,343	1,869		Paid off, 1923	
70	220	218·1	11·8	61·0	2,340	4,892	1,108	3,243	1,849	5,728	1,741	41	1,121	2,303	3,465		Paid off, 1927	
107	236	230·7	13·2	54·5	2,132	4,089	1,143	2,883	1,750	2,777	1,108	7	824	2,106	2,935		Paid off, 1925	
105	163	185·5	11·9	72·3	1,747	4,429	1,057	2,449	1,392	2,905	1,178	7	729	1,685	2,421		Paid off, 1926	
166	171	167·0	10·8	67·6	1,923	4,807	942	2,691	1,734	2,674	1,254	26	673	1,710	2,409	728	1,314	2,042
226	394	238·1	11·6	66·4	1,762	4,233	1,334	2,372	1,580	2,382	1,187		601	1,657	2,258		Paid off, 1927	
316	200	209·6	13·5	49·0	2,400	6,307	1,228	3,197	1,958	3,727	1,792	6	1,049	2,353	3,408		Paid off, 1929	
366	170	172·0	21·4	27·1	996	2,489	1,497	1,396	1,118	1,630	648		127	990	1,117		Paid off, 1920	
485	267	149·4	19·4	27·8	1,314	3,213	1,135	1,611	1,392	1,960	816		51	1,052	1,103		Paid off, 1923	
502	233	123·7	17·6	30·8	892	2,284	958	1,201	809	1,148	597	25	304	893	1,222		Paid off, 1921	

TABLE 56.—ILLUSTRATION OF THE ADAPTATION OF DIFFERENT LOAN REPAYMENT PLANS TO AN ACTUAL LOAN ON A SASKATCHEWAN FARM, 1919-1935

Loan Number 243 located in Rural Municipality Number 73—

Acres mortgaged	320
Acres suitable for cultivation	310
Soil—Haverhill Clay Loam	
Appraised Value	$10,000
Loans made	$4,000

Column No.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
Year	Calculated gross (1) income	Estimated farm (1) expenses	Balance for debt service	Deficit balance (cumulative)	Contracted payments					Actual payments							1/5 Crop-Share payment					
					Annual payments			Balance due on Principal	Surplus or deficit	Annual payments			Balance due (cumulative)			Surplus or deficit	Annual payments			Balance due		Surplus or deficit
					Total	Interest	Principal			Total	Interest	Principal	Interest arrears	Charges	Principal		Total	Interest	Principal	Interest arrears	Principal	
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
1919	1,434	1,650	− 216	− 216	306	257	49	3,905	− 522	303	260	43	−	−	3,857	− 518	−	−	−	260	4,000	− 216
1920	3,813	1,800	2,013	−	306	254	52	3,853	1,707	−	−	−	257	−	3,857	2,013	763	557	226	−	3,774	1,250
1921	2,962	1,500	1,462	−	306	250	56	3,797	1,156	326	326	−	−	−	3,857	980	592	245	347	−	3,427	870
1922	2,962	1,500	1,462	−	306	247	59	3,738	1,096	312	257	55	−	−	3,802	1,000	580	223	357	−	3,070	892
1923	2,962	1,500	1,462	−	306	243	63	3,675	1,036	40	40	−	214	−	3,802	322	415	200	215	−	2,855	147
1924	3,711	1,500	2,211	−	306	239	67	3,608	1,905	404	404	−	78	−	3,802	1,807	742	186	556	−	2,299	1,469
1925	2,379	1,500	879	−	306	235	71	3,537	1,273	400	329	63	−	−	3,802	1,473	676	149	527	−	1,772	1,293
1926	4,427	1,500	2,927	−	306	230	76	3,461	2,621	657	250	437	−	−	3,802	2,240	885	115	770	−	1,002	2,042
1927	2,035	1,500	535	−	306	225	81	3,380	329	299	221	78	−	−	3,724	536	407	95	342	−	660	128
1928	2,827	1,500	1,327	−	306	220	86	3,294	1,021	309	216	185	−	−	3,724	958	563	43	222	−	438	762
1929	360	1,500	−1,140	−1,140	306	214	92	3,202	−1,448	−	−	−	306	−	3,724	−1,140	−	−	−	9	138	−1,140
1930	400	1,400	−1,000	−2,140	306	208	98	3,104	−1,206	−182	−	−	428	182	3,724	− 818	−	−	−	19	138	−1,000
1931	56	1,300	−1,244	−3,384	306	202	104	3,000	−1,570	− 20	−	−	672	212	3,724	−1,234	−	−	−	29	138	−1,264
1932	163	1,200	−1,037	−4,441	306	195	111	2,889	−1,343	− 84	−	−	836	128	3,724	−1,121	−	−	−	40	138	−1,037
1933	108	1,200	−1,092	−5,533	306	188	118	2,771	−1,298	− 45	−	−	1,105	173	3,724	−1,047	−	−	−	52	138	−1,092
1934	170	1,200	−1,030	−6,563	306	180	126	2,645	−1,336	− 23	−	−	1,394	196	3,724	−1,007	−	−	−	64	138	−1,030
1935	642	1,200	− 558	−7,121	306	172	134	2,511	− 864	130	−	−	1,703	66	3,724	− 688	−	−	−	77	138	− 558

(1) The gross income is calculated by applying the average yield of wheat for Rural Municipality Number 73 to one-half of the acreage suitable for cultivation and calculating the value of the resulting estimated production on the basis of the Winnipeg price of wheat adjusted for grade and freight differentials.

(2) On the basis of studies carried on by the Farm Management Department, University of Saskatchewan, the necessary farm operating and living expenses on a half-section were estimated at $1,200 for 1935. This figure was adjusted for the years 1919 to 1934 according to the Cost of Living Index published in the *Labour Gazette*.

which would remain each year after allowance has been made for the farm operating and living expenses.[1] The effect of the low gross income relative to estimated expenses in 1919 is reflected in the fact that no payment was made on either interest or principal in 1920 (column 10). A similar situation existed each year after 1928. While during the intervening years the borrower paid up any arrears which accumulated and in 1926 and 1928 made payments on the principal in excess of that which was required by the contract, by the end of 1935 he owed $3,171 principal, $66 charges and $1,703 interest, a total of $4,940. Had the payments been made on the basis of a one-fifth share of the crop on each year when there was a surplus over the estimated necessary farm expenses no payments would have been required in 1919 or from 1929 to 1935. During the other years, however, considerably larger payments would have been required with the result that by the end of 1928 the principal would have been reduced to $138. The substantial surplus over the essential farm expenses and payment on the loan which is shown for each year from 1920 to 1928 would seem to indicate that such payment might have been made. While it must be admitted that the basis for estimating the farm income and expenses is not infallible, the difference in the net result is so great that there can be no doubt about the superiority of a crop-share payment plan as applied to Saskatchewan conditions.

Crop-share Plan.—The use of the crop-share payment plan as a basis for loan repayment has been criticized by some authorities on farm credit from the standpoint of the cost of administration together with the difficulty of financing an institution under such a system on bond issues maturing at regular intervals. While the cost of administration under a crop-share plan might be somewhat greater than under a system of regular payments, this is overshadowed by the possibility of reducing losses through better collections under the crop-share plan. In an area such as Saskatchewan where the principal source of income is wheat, which must be marketed through an elevator system, the problem of collections might be minimized by a co-operative arrangement with the elevator companies. A clear understanding of the system and the fact that it is designed to aid the borrower in repaying his loan should go a long way toward removing any tendency on his part to avoid making the required payments. The objection to the crop-share system on the grounds of the difficulty of meeting maturing bond issues is not valid, since under highly variable crop conditions, it is impossible to meet regularly maturing bond issues under any system of payment. It would seem, however, that a system of reserves together with a more flexible type of bond issue would adequately meet the situation.

Factors Affecting the Cost of Holding Real Estate

The cost of holding real estate is a very important consideration in the operation of any organization granting credit on the security of real estate. It has a direct bearing on the policy to be followed with regard to foreclosure and the sale of farms since, under circumstances where the cost of holding property is likely to be great, it may be advisable to avoid foreclosure and get rid of bad loans by writing down the debt to a point where liquidation is possible, or to sell at a sacrifice immediately following foreclosure. A study of the factors affecting the cost of holding real estate and the losses incurred therein should provide a basis for a constructive policy with regard to real estate and result in savings to organizations concerned.

The cost of holding real estate has been taken as the difference between the amount invested in a farm by the loaning agency at foreclosure and the investment at the time of sale, in the case of properties sold, or at 1935 in the

[1] *See* footnote on table 56 for explanation of method of estimating income and expenses.

case of farms still held at that time. Similarly, the loss on real estate sold has been taken to be the difference between the investment at the time of sale and the selling price.

Soil.—The foregoing analysis with respect to loaning operations has shown soil to be one of the more important factors affecting success of loans. The relation of soil to the cost of holding real estate is also shown to be important in table 57. However, while the average annual cost of holding farms having soil classified as excellent varied from $6.74 to $27.02 per $1,000 of loans it should be pointed out that for some unexplainable reason soils classified as fair showed the lowest cost of any group. The average number of years for which real estate was held, however, was progressively greater for the poorer soil groups.

TABLE 57.—RELATION OF SOIL TO THE COST OF HOLDING REAL ESTATE AND OTHER FACTORS

Soil	Number of farms	Investment in 1935 or when sold in per cent of investment at foreclosure	Average years held	Net cost per $1,000 of loans foreclosed	
				Total (dollars)	Per year (dollars)
Excellent	81	101·3	2·7	18·05	6·74
Good	409	104·6	2·8	66·10	23·99
Fair	254	101·2	3·2	18·84	5·84
Poor	284	106·0	3·4	92·00	27·02
Total or average	1,028	104·0	3·0	58·61	19·25

An even closer relationship exists between soil type and losses incurred on real estate sold (table 59). Not only is the yearly cost of holding as a percentage of the investment at foreclosure greater for the poorer soil groups but the

TABLE 58.—RELATION OF SOILS TO LOSS ON REAL ESTATE SOLD

Soil	Number of loans reporting	Average years held before sale	Average years since sale	Yearly cost of holding in per cent of investment at foreclosure	Loss per cent of investment when sold	Loss per cent of original loan	Debt 1935 in per cent of selling price
Excellent	39	1·5	4·2	1·06	0·6	0·9	84·9
Good	179	2·3	3·5	1·34	22·9	35·9	91·8
Fair	121	2·8	3·9	1·89	31·1	55·2	94·1
Poor	125	3·1	3·4	2·80	40·1	69·6	98·0
Total or average	464	2·6	3·6	1·85	27·2	44·9	92·8

loss, both in terms of the original loan and the investment at the time of foreclosure, is also greater on the poorer soils. The amount outstanding in 1935 in terms of the selling price averaged considerably less on farms having superior soils.

Topography.—Topography is also one of the most important factors to be considered in dealing with policy regarding real estate. Following foreclosure the investment in property held for sale increased by 3·5 per cent in the case of farms on level land and by 7·5 per cent on hilly land (table 59). The yearly

cost per $1,000 of loans amounted to $18.29 for level and $29.22 for hilly topography while the average number of years held was 2·7 and 4·1, respectively, for the two groups.

TABLE 59.—RELATION OF TOPOGRAPHY TO THE COST OF HOLDING REAL ESTATE AND OTHER FACTORS

Topography	Number of farms	Investment in 1935 or when sold in per cent of investment at foreclosure	Average years held	Net cost per $1,000 of loans foreclosed	
				Total (dollars)	Per year (dollars)
Level	695	103·5	2·7	50·20	18·29
Moderately rolling	237	104·8	3·5	76·75	22·07
Hilly	96	107·5	4·1	121·13	29·22
Total or average	1,028	104·0	3·0	59·04	19·39

A direct relationship was also found to exist between the topography and losses on real estate sold (table 60). The loss in per cent of the original loan amounted to 40·4 per cent on level topography and 76·6 per cent on hilly,

TABLE 60.—RELATION OF TOPOGRAPHY TO LOSS ON REAL ESTATE SOLD

Topography	Number of loans reporting	Average years held before sale	Average years since sale	Yearly cost of holding in per cent of investment at foreclosure	Loss per cent of investment when sold	Loss per cent of original loan	Debt 1935 in per cent of selling price
Level	309	2·3	3·5	1·83	25·2	40·4	94·1
Moderately rolling	110	2·8	3·9	2·00	29·1	50·6	88·7
Hilly	43	3·6	3·9	2·80	40·1	76·6	93·4
Total or average	462	2·6	3·6	1·91	26·9	44·3	92·5

while if calculated on the basis of the investment at foreclosure the loss amounted to 25·2 and 40·1 per cent respectively. No relation between topography and the proportion of the sale price outstanding in 1935 could be discerned.

TABLE 61.—RELATION OF LAND CLASS TO LOSS ON REAL ESTATE SOLD

Land Class	Number of farms reporting	Average years held before sale	Average years held after sale	Yearly cost of holding in per cent of investment at foreclosure	Loss per cent of investment when sold	Loss per cent of original loan
I	15	2·8	5·2	4·12	55·3	102·4
II	9	2·6	5·4	4·07	31·8	68·1
III	11	2·4	3·6	1·13	23·7	35·3
IV	1	3·0	–	3·73	1·5	22·7
Total or average	36	2·6	5·4	3·21	30·0	52·6

Land Class.—Unfortunately the number of foreclosed farms sold for which the land class was known is not sufficiently large to form the basis of definite conclusions with regard to the effect of land class on real estate. The relationship shown in table 61 is so definite, however, that it would appear that land class is one of the most important factors affecting losses incurred on real estate.

Size of Farm.—The general relationship existing between size of business and income again appears in the relationship between acres mortgaged and the cost of holding real estate (table 62). The investment in the smaller farms increased more proportionately following foreclosure than was the case with the larger farms. The net cost of carrying the farms under 200 acres in size amounted to an average of $30.64 per $1,000 originally loaned on them while the cost of carrying farms over 400 acres averaged only $10.60 per $1,000 loaned.

TABLE 62.—RELATION OF SIZE OF FARM TO THE COST OF HOLDING REAL ESTATE AND OTHER FACTORS

Acres mortgaged	Number of farms	Investment in 1935 or when sold in per cent of investment at foreclosure	Average years held	Net cost per $1,000 of loans foreclosed	
				Total (dollars)	Per year (dollars)
Under 200	510	106·4	3·5	108·21	30·64
200–399	386	104·1	2·6	60·28	23·41
400 and over	150	102·1	2·7	28·62	10·60
Total or average	1,046	104·0	3·1	59·82	19·53

The loss on farms sold amounted to 32 per cent of the investment at foreclosure for farms of less than 200 acres in size; 28·7 per cent for farms of from 200 to 399 acres and 18·9 per cent for those of 400 acres and over (table 63). The loss in terms of the original loan decreased similarly as the size of farm increased. It should be noted, however, that as a result of the years of low income preceding 1935 the amount owing on the farms sold in per cent of the selling price was much greater on the larger than on the smaller farms.

TABLE 63.—RELATION OF SIZE OF FARM TO LOSS ON REAL ESTATE SOLD

Acres mortgaged	Number of farms reporting information	Average years held before sale	Average years since sale	Yearly cost of holding in per cent of investment at foreclosure	Loss per cent of investment when sold	Loss per cent of original loan	Debt 1935 in per cent of selling price
Under 200	286	3·0	3·9	2·35	32·1	60·7	86·2
200–399	147	2·0	3·3	2·37	28·7	45·6	92·1
400 and over	46	2·1	3·0	0·67	18·9	27·7	101·0
Total or average	479	2·6	3·6	1·84	27·6	45·5	92·6

Appraised Value.—Reflecting as it does both size of farm and value per acre, the appraised value of the farm is closely related to the cost of holding real estate (table 64). While there was no significant difference between the deficits accumulating on the groups of farms of $4,000 to $8,000 in value and those over $8,000, the cost of holding farms valued at less than $4,000 per $1,000

TABLE 64.—RELATION OF APPRAISED VALUE TO THE COST OF HOLDING REAL ESTATE AND OTHER FACTORS

Appraised value in dollars	Number of farms	Investment in 1935 or when sold in per cent of investment at foreclosure	Average years held	Net cost per $1,000 of loans foreclosed	
				Total (dollars)	Per year (dollars)
Under 4,000	436	108·2	3·6	142·20	39·26
4,000–8,000	298	102·8	2·8	42·88	15·56
8,000 and over	289	102·7	2·4	41·07	17·11
Total or average	1,023	103·8	3·0	56·38	18·70

loaned was more than double that of the other groups. The loss written off on real estate sold is also much lower for the high valued farms (table 65).

TABLE 65.—RELATION OF APPRAISED VALUE TO LOSS ON REAL ESTATE SOLD

Appraised value in dollars	Number of farms reporting information	Average years held before sale	Average years since sale	Yearly cost of holding in per cent of investment at foreclosure	Loss per cent of investment when sold	Loss per cent of original loan	Debt 1935 in per cent of selling price
Under 4,000	261	3·2	3·9	3·10	33·8	66·2	88·7
4,000–8,000	113	2·1	3·2	1·76	29·2	48·4	92·5
8,000 and over	102	1·7	3·2	1·77	23·7	36·4	91·7
Total or average	476	2·6	3·6	1·91	27·4	45·2	92·7

Terms of Payment.—In order to get rid of real estate obtained through foreclosure it is customary for many loaning agencies to sell farms with little or no down payment. Based on those sales for which the information was available, less than 10 per cent of the farms were sold outright for cash, while in the case of over 40 per cent no down payment was received (table 66). While

TABLE 66.—RELATION OF CASH PAYMENT EXPRESSED AS A PERCENTAGE OF SELLING PRICE TO LOSS ON REAL ESTATE SOLD

Cash payment in per cent of selling price	Number of farms reporting information	Average years held before sale	Average years since sale	Yearly cost of holding in per cent of investment at foreclosure	Loss per cent of investment when sold	Loss per cent of original loan	Debt 1935 in per cent of selling price
0	164	2·8	2·4	1·91	25·8	40·9	111·1
1–24	124	2·9	3·3	2·45	31·4	53·6	91·8
25 and over	98	2·3	6·3	2·86	27·9	50·9	46·3
Total or average	386	2·7	3·7	2·26	27·8	46·0	93·0

no significant relationship could be discerned between the down payment and the "book" loss, the large proportion of the selling price outstanding in 1935 on those farms where little or no down payment was made would lead one to believe that many purchasers will be unable to pay the price agreed upon with the result that many of the farms probably will be returned.